SPUDNIK

OPERATORS/ PARTS MANUAL

MODEL 80XX

PLANTER

Part # 290143

For Serial Numbers Beginning

8040-55-39

8060-55-96

8080-55-38

Service Centers

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Introduction

Welcome to the SPUDNIK line of potato handling equipment. We appreciate your decision to make our equipment a part of your operation, and look forward to a long term partnership. We strive to put the best quality and workmanship into each of our machines, and hope as you use you're **MODEL 80XX PLANTER**, that you will find this to be true. This owner's/operators manual has been prepared to aid you in the safe operation and service of your planter.

Read this manual carefully to learn how to operate your machine safely and within the designed limits of this machine. Failure to do so could result in personal injury and/or damage to the machine.

This manual is considered to be an important part of this machine and should accompany it when moved from location to location.

Warranty is provided, as a part of the SPUDNIK EQUIPMENT COMPANY LLC service program, for customers who operate and maintain their equipment as outlined in this manual.

OWNER REGISTRATION

Name	
Address	
City	
State / Province	
Country	
Model Number	Serial Number
Purchase Date	

Foreword to the Operating Manual

This operating manual is intended to familiarize the user with the **80XX PLANTER** and its designated use.

This operating manual contains important information on how to operate the machine safely, properly and efficiently. Observing the instructions in this manual helps to avoid dangers, reduce repair costs and down-times, and to increase the reliability and service life of the machine. Please also take note of the section “Dangers, operating errors and exemption form liability”.

This manual is to be supplemented by the respective national rules and regulations concerning accident prevention and environmental protection.

The operating manual must always be available wherever the machine is in use.

This operating manual must be read and applied by all persons involved with the machine, such as:

•**Operation,** including setting up, troubleshooting during operations, care, disposal of fuels and consumables

•**Maintenance,** (servicing, inspection, repair), and/or

•**Transport**

In addition to this operating manual and the relevant mandatory rules and regulations concerning accident prevention and environmental protection of the country or region in which the machine is being used, the generally recognized technical rules for safe and proper working must also be observed.

Limited Warranty Policy for New Spudnik Machinery

Spudnik Equipment Company LLC ("Spudnik") warrants to the original purchaser each new Spudnik machine to be free from defects in material and workmanship. Spudnik will repair or replace, at its option, any part covered by this warranty that is found to be defective during the warranty period outlined below. Warranty service must be performed by an authorized dealer or representative of Spudnik. This warranty is applicable only for the normal service life expectancy of the product or components, as noted in the following table. Once the warranty period has begun, it cannot be stopped or interrupted.

What is included in the Spudnik Warranty:

Product	Warranty Term
Rollers, Sprockets, Roller Chain, Belt Lacing, and Bearings	180 Days from 1st day of operation or 720 Hours of machine operation, whichever comes first
All paint to include: Insufficient coverage, failure of paint adherence, and excessive runs. NOTE: Excessive runs not to exceed more than 15% of the painted surface on the machine.	12 Months from date of delivery of new Spudnik product to the original retail customer
All other materials and workmanship (except as noted below)	12 Months from date of delivery of new Spudnik product to the original retail customer
Genuine Spudnik replacement parts and components	30 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer

Those items that are excluded from this warranty are as follows:

(1) any merchandise or components thereof, which, in the opinion of the company have been subject to: (a) Rock chip damage and other abuse to painted surfaces, (b) damage caused by weather (to include UV damage), accident, or acts of God, (c) any product that has been altered or modified in ways not approved by Spudnik Equipment Company LLC., (d) depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, misuse, failure to follow the product's Operator Manual recommendations, (e) Using machine for other than normal moving of agricultural products during planting, harvest, and processing seasons. Agricultural products to include: Potatoes, beets, onions, carrots, grains, etc., (2) Used products, (3) Repairs made by unauthorized dealers.

To Obtain Warranty Service

To be eligible for the Spudnik warranty, purchaser must: (a) Have already remitted payment in full (b) have filled out and submitted the Spudnik Delivery Declaration form to a Spudnik representative (c) report the product defect to an authorized dealer or Spudnik sales representative and request repair within 30 days of noticing the defect and (d) make the product available to the dealer or service center within a reasonable period of time, transportation charges prepaid.

The selling dealer has no authority to make any representation or promise on behalf of Spudnik, or to modify the terms or limitations of this warranty in any way.

Limited Warranty Statement

To the extent permitted by law, Spudnik does not make any warranty, representation, or promises express or implied as to the quality, performance, or freedom from defect of any Spudnik New Machinery. NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS IS MADE. IN NO EVENT WILL SPUDNIK, AN AUTHORIZED SPUDNIK DEALER, OR ANY COMPANY AFFILIATED WITH SPUDNIK BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. This warranty is subject to any existing conditions of supply which may directly affect our ability to obtain materials or manufacture replacement parts. Spudnik reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligation to owners of units previously sold. No one is authorized to alter, modify or enlarge this warranty nor the exclusion, limitations and reservations.

To obtain more information, please contact your dealer or Spudnik at 1-208-785-0480.

Product Characteristics

Manufacturer's address

SPUDNIK EQUIPMENT COMPANY LLC
584 W 100 N
PO Box 1045
Blackfoot, ID 83221
Phone: (208) 785-0480
Fax: (208) 785-1497
www.spudnik.com
E-mail: spudnik@spudnik.com

Advice concerning inquiries and orders

Please quote the type designation and the machine number when ordering accessories and spare parts.

The use of spare parts supplied by third parties shall only be permitted after consultation with the manufacturer. Original spare parts and accessories approved by the manufacturer are a contribution to safety. The use of other parts may invalidate the liability of the manufacturer for any consequences arising out of such use.

Type plate on machine

Machine serial number
The machine serial no. is punched into a plate on the frame.

The entire designation has the status of a legal document and may not be removed, changed or rendered illegible!

Dangers, operating errors and exemption from liability

1. No responsibility will be accepted for possible dangers arising from operating the machine in a way which does not comply with its designated use.
2. Damage to agricultural produce particularly vulnerable to damage during processing cannot be entirely ruled out. Weather conditions, the quality of the produce and many other circumstances beyond our or the operator's control have an influence on the vulnerability to damage the produce being processed. For example, when processing the submerged weight, the manuring (nitrogen content), the degree of maturity (firmness of the skin), the temperatures during processing and many other circumstances can have an influence on the vulnerability to damage. These examples do not claim to be exhaustive.
3. To avoid damage to agricultural produce the user must adapt the machine to the respective operating conditions. The results produced by the machine must be constantly monitored and checked.
4. SPUDNIK shall not be liable for any damage to agricultural produce and other items which occurs as a result of operating and adjustment errors or other incorrect usage.
5. SPUDNIK accepts no liability for any damage caused as a result of operators not complying with the designated use of the machine. This also applies to damage to agricultural produce which, because of certain external influences, cannot be avoided with the current state of the art.

Safety

This operating manual contains basic directions which should be observed during setting-up, operation and maintenance. Therefore, this operating manual absolutely must be read by the personnel concerned prior to starting up and using the machine, and must be available for them at all times. Any instructions which are not understood must be clarified before initial operation of the machine, for clarification, please consult your SPUDNIK agent or contact us directly.

All safety instructions must be observed, both the general safety instructions given here and the specific safety instructions given elsewhere in this manual.

Observe the advice contained in the operating manual as well as the generally applicable safety and accident prevention regulations!

If safety instructions are not complied with, you risk injury to yourself and others as well as damage to the environment or the machine. Non-compliance with safety instructions can also void claims for damages.

Identification of important instructions in the operating manual

Text marked with this symbol alerts you to possible accident and injury hazards; hazards to machinery; practical applications, settings or functions; or environmental protection measures.

Qualification and training of personnel

•Any work on or with the machine may only be performed by reliable personnel. Statutory minimum age limits must be observed.

•Employ only trained or instructed staff; the individual responsibilities of the personnel for operation, setting-up, maintenance and repair must be clearly established.

•Make sure that only authorized personnel work on or with the machine.

•Define the machine operator’s responsibilities – also with regard to observing traffic regulations. The operator must have the authority to refuse any instructions issued by third parties which contravene safety!

•Persons requiring training or instruction and those in a general training course, should not be allowed to work on or with the machine unless they are under the constant supervision of an experienced person.

•Work on the machine’s electrical system may only be carried out by an electrician or by persons working under the supervision and guidance of an electrician; all such work must be carried out in accordance with electrical engineering regulations.

•Work on the wheels, braking and steering systems may only be performed by specially trained personnel.

•Work on the hydraulic system may only be carried out by personnel with special knowledge and experience of hydraulics.

•The use of spare parts, accessories and auxiliary equipment not supplied and/or not approved by SPUDNIK can have detrimental effect on the construction of the SPUDNIK machine or on its functions and hence impair the active and./or passive driven an/or operational safety (accident prevention).

•SPUDNIK shall not be liable for any damage caused by the use of parts, accessories and auxiliary equipment not supplied and/or approved by SPUDNIK.

•Conversions of or modifications to the machine may only be carried out after consultation with SPUDNIK.

General safety and accident prevention regulations

The safety advice and information given in this operating manual, the valid nation regulations concerning accident prevention and any applicable internal employment, operational and safety regulations of the operator are to be observed.

1. Warning signs and other notices on the machine provide important information for safe operation. Observing them will serve your safety.
2. Before starting work, make yourself familiar with all the equipment and controls as well as their functions. To do so when you have already started work is too late!
3. The user should wear close-fitting clothing. Avoid loose-fitting clothing!
4. Keep the machine clean to avoid the risk of fire!
5. Check around the machine before moving off or starting up (watch out for children)! Make sure you have adequate all-around visibility.
6. Always match your speed to the local conditions! Avoid sudden turning maneuvers when driving uphill or downhill or when traveling across a slope!
7. Observe the respective regulations when using public roads!
8. Take into account the wide overhang and/or the sideways force acting on the machine when turning or negotiation curves!
9. Only start up the machine when all guards are attached and in their correct (protective) position!
10. Stay clear of the turning and pivoting areas of the machine!

Non-observance of the safety and accident prevention regulations entails the following risks:

-Endangering the operator or other nearby persons as a result of safety devices not being fitted or being in their correct (protective) position!

-Damaging important machine functions!

-Errors when carrying out maintenance or repair work!

-Endangering the operator or other nearby persons through certain mechanical or chemical peculiarities!

-Risk of pollution due to leaks in the hydraulic system, fuel tank, pipes, as well as in the engine and gearbox!

Special safety instructions

Towed machines

1. Risk of injury when hitching up or unhitching machine to/from the tractor!
2. Never allow persons to stand between the tractor and the machine unless the tractor is secured against rolling away by means of the parking brake and/or wheel chocks!
3. Hitch up the machine only in accordance with the instructions and only to the prescribed components! Follow the instruction in the tractor's manual.
4. Beware of dangerous points (risk of injury through crushing and shearing) when operating the support foot!
5. Never exceed the permissible nose weight of the machine coupling!
6. Never exceed the permissible axle loads and total weight of the tractor (see vehicle documents)!
7. During transport, secure all moving parts with the retainers provided to prevent movement and hence possible accidents!
8. It is forbidden to allow persons to ride on the machine while traveling on roads!
9. Driving, steering and braking ability!
10. Before leaving the tractor, switch off the engine, remove the ignition key and secure the machine against rolling away. Use wheel chocks!
11. The design and function of intake and discharge mechanisms, e.g. webs, sifting units, chutes, means that they cannot be fully protected. Therefore, keep a safe distance from such moving parts when in operation! This advice applies to all other similar auxiliary equipment!
12. Keep clear of the discharge area!
13. Never stand or work beneath suspended loads! persons are only allowed to stand or work under suspended machines or machine parts (e.g. car elevator, discharge conveyor belt) when safety supports are fitted (e.g. trestle, crane). This particularly applies to maintenance and repair work.
14. Dangerous implements are located behind safety covers. These do not necessarily come to a standstill as soon as the drive is switched off. Therefore, keep well clear until such parts have come to a standstill! Never open safety devices such as covers, flaps, etc. while the machine is in operation! Never reach under safety devices!
15. Only carry out maintenance, repair and cleaning work on the machine when the drive is switched off and the engine is stationary! Remove the ignition key form the tractor.
16. Wear suitable protective clothing, gloves, footwear, etc. when handling sharp machines, e.g. cutting knives.
17. Keep clear of opening/hinged covers and guards!
18. Only start up the machine when all safety devices are attached and in the correct (protective) position! It is forbidden to open or remove safety devices (e.g. covers, flaps, etc.) on the machine while it is in operation!
19. Persons are not allowed to be on the machine while it is operation!

Special safety instructions

Using a power take-off (PTO) shaft

Observe the operating instruction of the PTO shaft manufacturer! An operator's manual is supplied with every PTO shaft.

Only use the PTO shafts specified by the manufacturer!

PTO shaft housing and guard cone as well as PTO shaft guard must be fitted and in a proper condition.

For PTO shafts, make sure the tube overlaps by the given amount in both transport and working positions.

Only attach and remove the PTO shaft when it is disengaged, with the engine switched off and the ignition key removed!

When using PTO shafts with overload or freewheel couplings which are not covered by the guard on the towing vehicle, fit the overload or freewheel coupling on the machine side!

Always make sure that the PTO shaft is correctly mounted and secured.

Attach the chain to prevent the PTO shaft guard from turning!

Before engaging the PTO shaft, ensure that the selected speed and direction of rotation of the towing vehicle's PTO shaft agree with the permissible speed and direction of rotation of the machine!

Before engaging the PTO shaft, make sure that no persons are within the danger area of the machine!

Electrical system, electronics

Use only original fuses with the specified current rating! Switch off the machine immediately if a fault occurs in the electrical power supply.

Work on the electrical system or equipment may only be carried out by an electrician, or by specially instructed personnel under the control and supervision of an electrician, and in accordance with the applicable electrical engineering regulations.

The machine's electrical equipment is to be inspected and tested at regular intervals. Defects such as loose connection or scorched cables must be rectified immediately.

The machine is fitted with electronic components and modules, the function of which may be influenced by the electromagnetic fields of other equipment. Such interference can lead to potentially dangerous situations if the following safety advice is not observed.

If electrical or electronic devices and/or components are retrofitted to the machine then it is the responsibility of the user to check whether such installations interfere with the vehicle's electronics or other components.

This particularly applies to:

-Mobile telephones,

-Radio equipment.

In particular, the following conditions must also be satisfied if mobile communications systems (e.g. radio, telephone are to be installed subsequently:

-Only approved devices complying with the relevant national regulations may be installed.

-The device(s) must form a permanents installation.

-the operation of portable or mobile devices in the tractor or on the machine is only permitted via a connection a permanent external aerial.

-The transmitter part must be installed separately from the vehicle electronics.

-A properly installed aerial is to be fitted with a good earth connection between aerial and vehicle chassis.

The installation instructions of the machine manufacturer are also to be observed for the wiring and fitting as well as the maximum current consumption.

Special safety instructions

Hydraulic system

1. The hydraulic system is under high pressure!
2. Make sure that the hydraulic system is depressurized (tractor and machine) when connecting the hydraulic hoses to the tractor's hydraulic system.
3. Hydraulic hose lines should be inspected at regular intervals and replaced if damaged or worn! New hose lines must comply with the technical specification of the machine manufacturer! Hoses and hose couplings undergo a natural ageing process, even if stored and used correctly; therefore, their period of storage and use is limited. The service life of a hose may deviate from these figures if experience has shown this to be the case, in particular taking into account the potential danger.
4. Fluids escaping under high pressure (hydraulic oil) can penetrate the skin and cause serious injuries! If such injuries occur, call a doctor immediately! Risk of infection!
5. Lower the machine, depressurize the system and switch off the engine before working on the hydraulic system!
6. Take care when working on the hydraulic system. Hot hydraulic oil can cause serious burns! Let the hydraulic system cool down beforehand and wear gloves! Collect and dispose of old oil in accordance with the regulations!

Warning symbols and other instruction notices on the machine

SIGNAL WORDS:

DANGER, WARNING, and **CAUTION** are signal words with messages:
DANGER: An immediate and specific hazard, which **WILL** result in severe injury or death if proper precautions are not taken.
WARNING: A specific hazard or unsafe practice, which **COULD** result in severe injury or death.
CAUTION: Unsafe practices, which **COULD** result in personal injury if proper precautions are not taken.

MOVING DRIVES Can cause severe injury.

Shut off power before removing shields.

EXPOSED DRIVE Can cause severe injury.

Keep all shields in place while machine is running.

MOVING MACHINE Can cause severe injury or death.

Do not mount or dismount moving machine.

LOW SPEED TIRE Can cause severe injury or machine damage.

Do not exceed 20 m.p.h.

Warning symbols and other instruction notices on the machine

MOVING MACHINERY Can cause severe injury or death.

Do not ride.

CRUSHING HAZARD

KEEP HANDS AND FEET AWAY FROM MACHINERY WHILE RUNNING.

WARNING
HIGH PRESSURE OIL
Can cause serious injury or death.
Do not go near leaks.
Relieve hydraulic pressure before loosening fittings.
If injured, seek immediate emergency medical help.

HIGH PRESSURE OIL Can cause serious injury or death.

Do not go near leaks. Relieve hydraulic pressure before loosening fittings. If injured, seek immediate emergency medical help.

Configuration and functions of the machine

Method of operation of the machine

The SPUDNIK planter is designed for planting potatoes.

This chapter describes the configurations and function of the individual subassemblies.

Configuration and Functions of the Planter

Row Spacing – 32”, 34”, 36”, 38”, 36-40”

Move planting unit, hopper, top bin, extension, shoes, also the first and last row unit.

Seed Spacing – 6-18”

SPUDNIK Sprockets		Ideal Seed Spacing
Front	Rear	Seed Spacing (in.)
28	15	6
25	15	6.5
24	15	7
23	15	7.5
21	15	8
24	18	8.5
25	21	9
21	23	9.5
26	23	10
25	23	10.5
26	25	11
24	25	11.5
23	25	12
22	24	12.5
21	24	13
18	15	13.5
18	22	14
18	23	14.5
18	24	15
18	25	15.5
15	21	16
15	22	16.5
15	23	17
18	28	17.5
15	24	18

Inside Jack Shaft Sprocket and Cup Belt Information

Part No.	Sprocket	Cup Size	Total # Cups
881045	24	Blue Cups Large	30
881114	20	Green Cups Medium	36
881111	18	Red Cups Small	40

Note:
Drive wheel slip in the field will necessitate a change in sprocket size from the ideal listed in the chart above, to a slightly smaller sprocket. For example, if 10 percent slip is occuring, and a 10 inch spacing is desired, then a 25 tooth sprocket will need to be used on the rear instead of the 23 tooth sprocket listed in the chart.

Additional Quick-Change Sprockets	
Part #	No. Teeth
881287	12
881288	13
881289	14
881290	15
881291	16
881292	17
881293	18
881294	19
881295	20
881296	21
881297	22
881298	23
881299	24
881300	25
881301	26
881302	27
881303	28

Configuration and Functions of the Planter

Planting Depth –Is adjusted depending how equipped, with the gage wheel (optional) on each pair of shoes,

the DepthWheels on the front of the Planter, or the Draw Bar

Covering Discs –

Are adjustable for angle, depth, and width.

Tighten Idlers –

Mechanical drive, and chemical box drives.

Cup belt shaker –

The rear side of the cup belt has two V-ledges. The movement of the V-ledges over the pressure rollers causes a vibrating motion. This vibration motion prevents dual allocations in the planting cups.

Adjust vibration intensity –

The intensity of the vibration movement can be adjusted using he lever on the side of each row unit. This adjustment is for intense individual shaker adjustments; to make minor adjustments to all units, us the control box CP600.

Setting:

-Loosens the star wheel on the side.

-Move lever until the desired vibration is met.

-Tighten wheel.

Reducing the vibration intensity –

If the lever is pushed up, the pressure rollers are moved away from the cup belt. The pressure Rollers exert less pressure against the V-ledges on the cup belt. The reduced contact pressure of the pressure rollers reduces the vibrating motion.

Fine adjustment is achieved using the star wheel on the top of the lever.

-turn to the right to increase

-turn to the left to decrease

Increasing the vibration intensity –

If the lever is pushed down, the pressure rollers are moved towards the cup belt. The pressure rollers exert more pressure against the V-ledges on the cup belt. The increased contact pressure of the pressure rollers increases the vibrating motion.

*the intensity of the vibrating movement must be adap4ted to the shape and size of the seed potatoes.

*when using the electrical intensive vibrators, the level may be adjusted to regulate the vibrating intensity solely between the upper and lower step (E) of the crank. The steps (M) are exclusively meant to adjust the mechanical vibrations.

Cup belt high-intensity shaker (optional) –

The high-intensity shaker produces an enhanced vibrating motion. It is electrically driven. The intensity of the vibrating movement can be adjusted using the lever previously described. The vibration frequency can also be adjusted through the CP600.

Configuration and Functions of the Planter

Seed Level in Bowl –

If there is not adequate seed in the bowl, skips will result. Adjust the sensor on top of the bowl. The maximum seed level should be one inch below the top edge to the seed weight door at the rear. The bowl level should be observed while planting because the bowl may over fill when stopping or lifting the planter.

Speed of Feed Chains –

Mechanical drive is adjusted from the tractor. Hydraulic drive is adjusted manually from the valve located on the back of the planter.

Specifications			
Model	**8040**	**8060**	**8080**
Weight:	9,000 lb.	13,500	18,000
Hopper Capacity:	7,000 to 8,000 lb.	11,000 to 12,000 lb.	15,000 to 16,000 lb.

Configuration and Functions of the Planter

Row Unit Set-Up

To achieve the highest accuracy while planting it is important to have the row unit properly adjusted.

Feed Chain Speed –

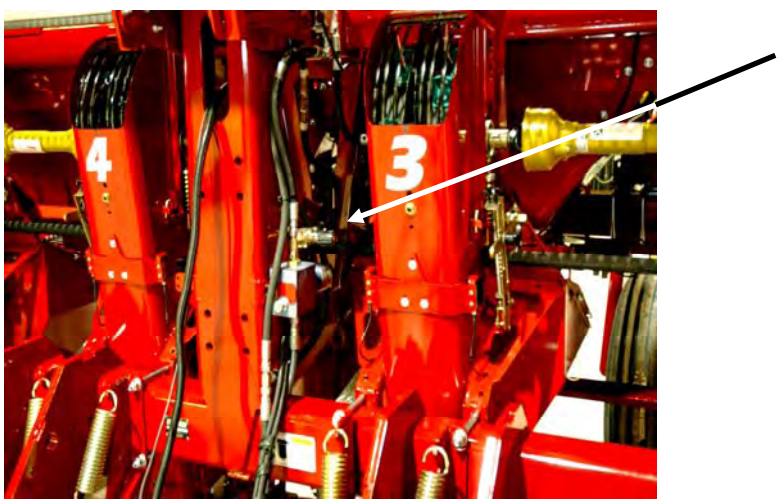
The speed of the feed chains can be set by adjusting the flow control Needle valve (1) in the front center of the planter. On a mechanical drive planter it can be adjusted with the flow control on the tractor valve. This speed should not be too fast to throw potatoes at the belt. However it must be fast enough to keep the seed bin full.

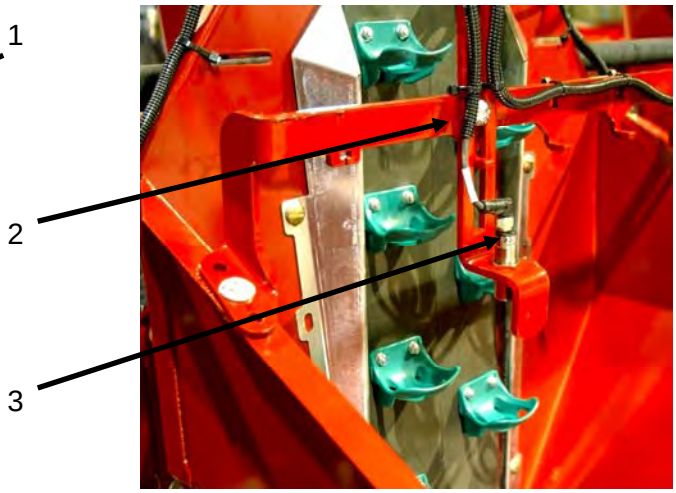
Seed Bin Level –

Before adjusting the row unit itself it is important to set the level of the seed bin. There are two ways to do this:

1. Loosen the carriage bolt (2) on the sensor bracket and slide the sensor to the desired position.

2. With a small screwdriver tighten or loosen the adjusting screw (3) located on the sensor itself. This changes. The "seeing" distance of the sensor. This screw is located on top of the sensors with plastic connectors and on the side of the barrel of the sensors with the metal connectors.





The level of the seed bin is critical. There must be enough seed in the bin so that there are no skips as the cups come out of the potatoes. If this level is too high it is difficult to shake off all of the doubles.

Note: This bin level greatly effects how the shakers and the belt react. If you change this level you will have to adjust the shakers.

Shaker Frequency –

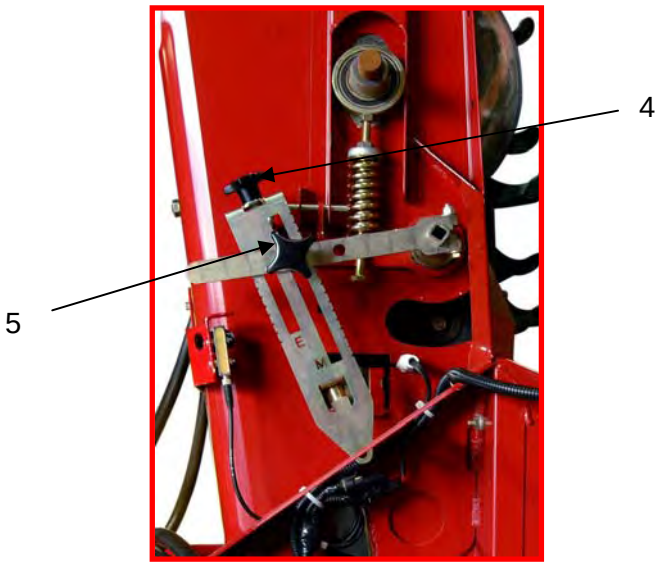
The electrical and hydraulic shaker options offer a high frequency vibration to the belt and cups. This frequency is adjustable from ~0 to 2100 Hz. A good starting point is about 50-60% of the maximum shake. This is adjusted on hydraulic shakers in one of two ways , with the CP 600 Control Box using the control panel. Without the CP 600 Control Box , using the Tractor's Remote. On electric shakers it is adjusted by pressing the button under the bar graph entitled "shaker" and then adjusting the value with the knob. If the button stays on it will be in a manual override mode and not shut off the shakers at the end of the field. When you are done adjusting the shaker make sure to press the button again so that the light goes off.

Configuration and Functions of the Planter

Row Unit Set-Up

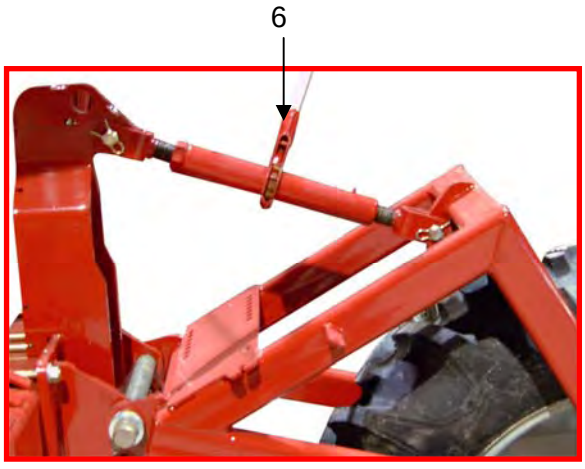
Shaker Position –

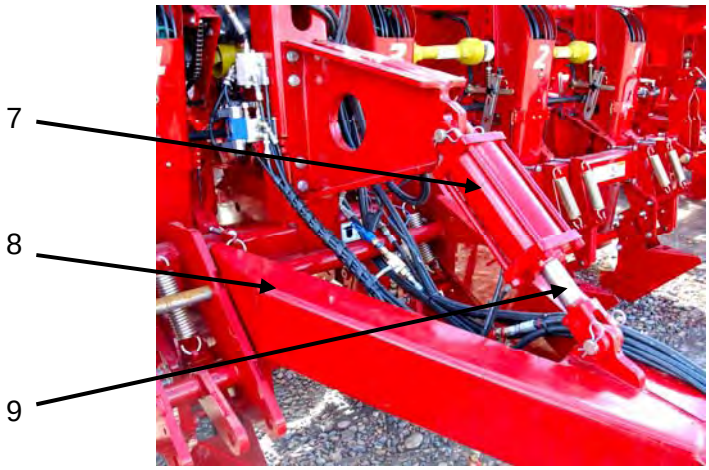
The position of the shaker is the most effective adjustment when trying to change the shake for different seed and different conditions. There is a coarse adjustment knob (4) and a fine adjustment knob (5). A good starting point is to loosen the coarse adjustment and with the shaker on let it move to a stabilized point. Tighten the course adjustment and with the shaker on let it move to a stabilized point. Tighten the course adjustment and them move the shaker in (more shake) or out (less shake) depending on seed cut and the planting speed. Turning the fin adjustment knob (5) clockwise will add more shake.



Seed Depth –

The seed depth is controlled by controlling the depth of the front of the planter. On a planter with front depth wheels this is done by adjusting the turnbuckles (6) on the depth wheels. On a drawbar style planter (with no depth wheels) the depth is controlled with the drawbar cylinder (7) on the drawbar, (8) and Cylinder Stops (3/4" to 2" in ¼" increments) placed around the shaft (9) to achieve proper depth. There is also a small gage wheel attachment available that controls two rows independent of the others. This is a mechanical linkage adjustment.



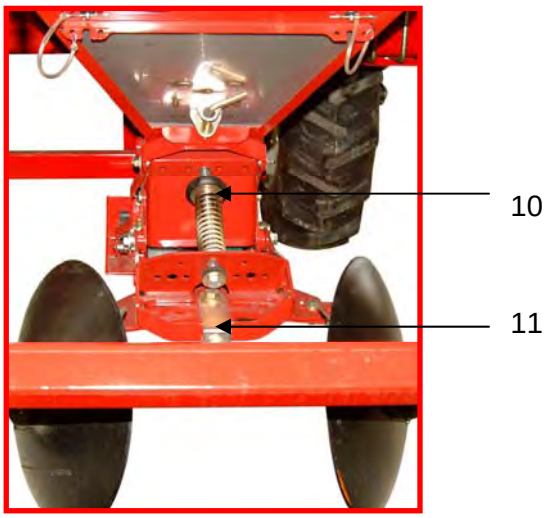


Configuration and Functions of the Planter

Row Unit Set-Up

Covering Disks –

The down pressure on the discs is controlled by tightening the spring with the adjustment knob (10). For a wider gill remove the bolts and slide each disc assembly out from the center. The angel of the discs can also be changed by moving the disc assembly to another hole combination. A fine adjustment can be made by adjusting the rear adjustment bolt (11). Tighten all bolts after final adjustments are made.



Seed Spacing –

Seed spacing is set on a mechanical drive planter by changing the ratio of the front (12) and rear (13) sprockets on the front drive of the planters.

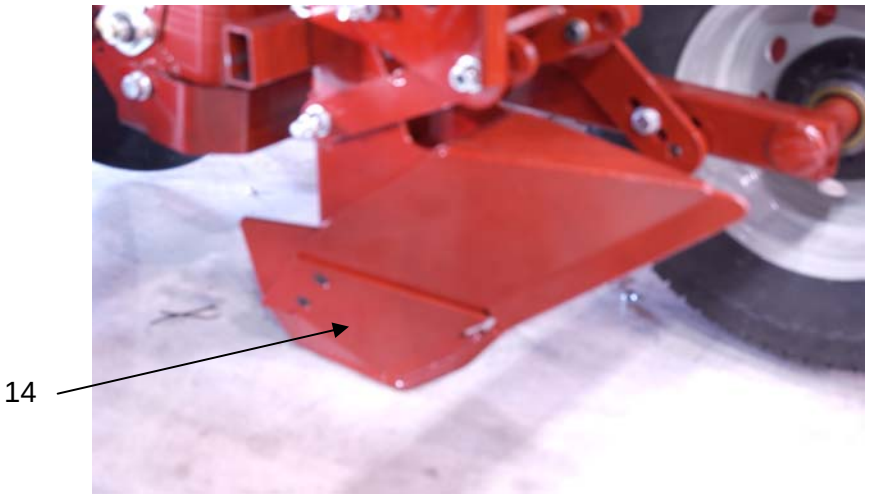
This is set on a hydraulic drive planter by changing the spacing in the CP600.

Configuration and Functions of the Planter

Row Unit Set-Up

Seed Accuracy –

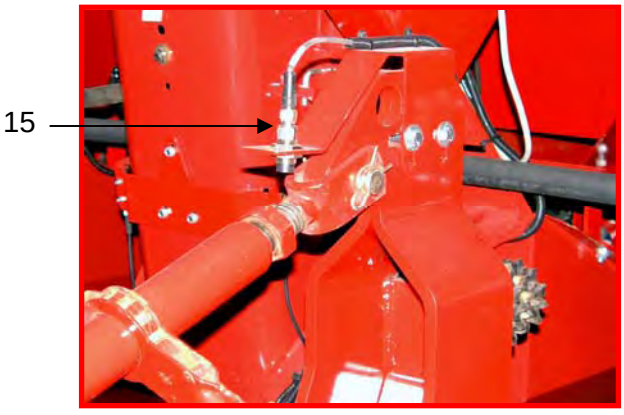
To achieve more accurate seed spacing it is critical to control seed roll. Adjustable wings (14) have been mounted on the inside of the shoe which move in and out according to soil conditions. The goal is to try to pint eh seed as it falls into the furrow. If the soil wraps too soon the seed depth will vary as there is loose soil underneath the seed. If the wings are back too far the seed has an opportunity to roll.



Working Position Sensor –

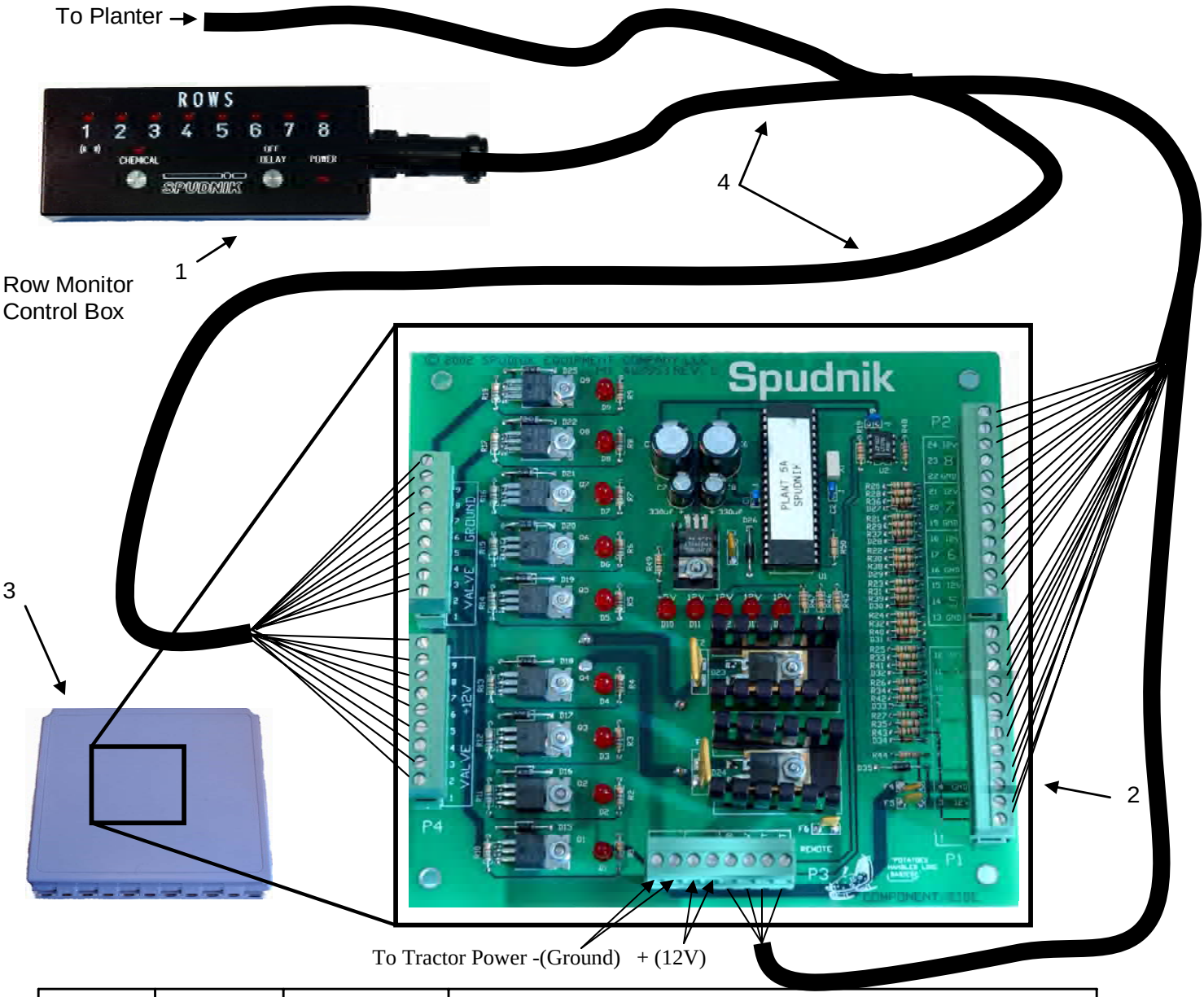
The working position sensor is used to turn off the row units and shakers while turning around at the end of the field. On a planter with front depth wheels this sensor is mounted on the depth wheel itself (15). The top hole is slotted so that the turnbuckle moves up and down as there tire is lifted off the ground. The sensor senses the turnbuckle end to know if the planter is up or down.

On a drawbar style planter without depth wheels it is mounted to sense the position of the front drawbar (16) to determine of the planter is up or down.



Parts Breakdown

The following diagram shows how the Row Monitor Control Box is connected to the PCB Processor.



Item #	Quantity	Part #	Description
1	1	450152	PLANTER DISPLAY COMPLETE
2	1	402553	PCB PLANTER MACHINE 3 WIRE
3	1	402366	ENCL,10Wx12Hx6D A-12106CHQRFG
4	1	402760	W-HARNESS,8040/8060-LOW-05-CURRENT
or	1	402761	W-HARNESS,8080-EXT-LOW-05-CURRENT

Basic Operation

The Spudnik Planter takes seed from the large seed bin, across a hopper fill chain, which fills the small hopper and keeps it at an optimum level. The planting cups pull the seed from this small hopper to plant the seed. The small hopper has a computer controlled monitoring system that controls the hopper fill chain to keep the seed level constant in the small hopper. The monitoring system output is displayed on the cab control box. The cab control box can be programmed for different delay times to accommodate different row space or tractor speed.
The ON DELAY or on time is the time the hopper fill chain runs before an alarm sound. If the mechanism is allowed to run because of a stuck seed piece, or other problem, the seed may overflow the small hopper, and spill seed on the ground.
The OFF DELAY or off time is the time the hopper fill chain is off. If a stuck seed piece or other problem appears, and the chain is not allowed to run, the hopper will empty and a skip will be the result.

Timing Setup

1.The control box monitors the action of the planter, and reports when ON or OFF parameters are exceeded.
It reports on the two important issues:
A.If the hopper fill chains have been off too long.
B.If the hopper fill chains have been running too long.
Several delay times can be set into the control box, to allow for seed size, space between seed, or speed of the tractor, to alert you of the possible problem of running too long, or off too long. (see chart 1 below)
1.A simple push and release of the "DELAY" button will change the delay times to the next longer delay and will be displayed with lights labeled 1 - 8. Note that when the 8 delay is reached, the next press of the "DELAY" button will wrap around to the 0 delay with no lights on. To view which delay you are on, push the "DELAY" button, hold the button until you read which light is on and then release it. The value will be stored in permanent memory, but may be changed as above.
The available delays are listed below with the corresponding light. (see chart 1 below)
A.The “off” time delay will turn on the row light of the row with a problem, and an audible alert tone will sound. The tone will last for two seconds and then go off. The light stays on until the problem is corrected.
B.The “on” time delay will flash the row light of the row with a problem, and an audible alert tone will sound. This will continue until the problem is corrected.
Chart 1

Display Light	On Delay in Seconds	Off Delay in Seconds
0	0	0
1	4	40
2	4	45
3	4	50
4	6	55
5	6	60
6	8	65
7	8	75
8	8	80

Row Setup

3. To set up cab display for the 4, 6, or 8 row planter, (see chart 2):

A.Before power is applied to the unit, push down and hold the ”CHEMICAL" button and the “DELAY" button, and then apply power to the unit. After power is applied to the unit, release the buttons, one of the 8 row lights will be on showing what the planter is set for. Either 4, 6, or 8 will show a 4 row, 6 row, or 8 row planter.

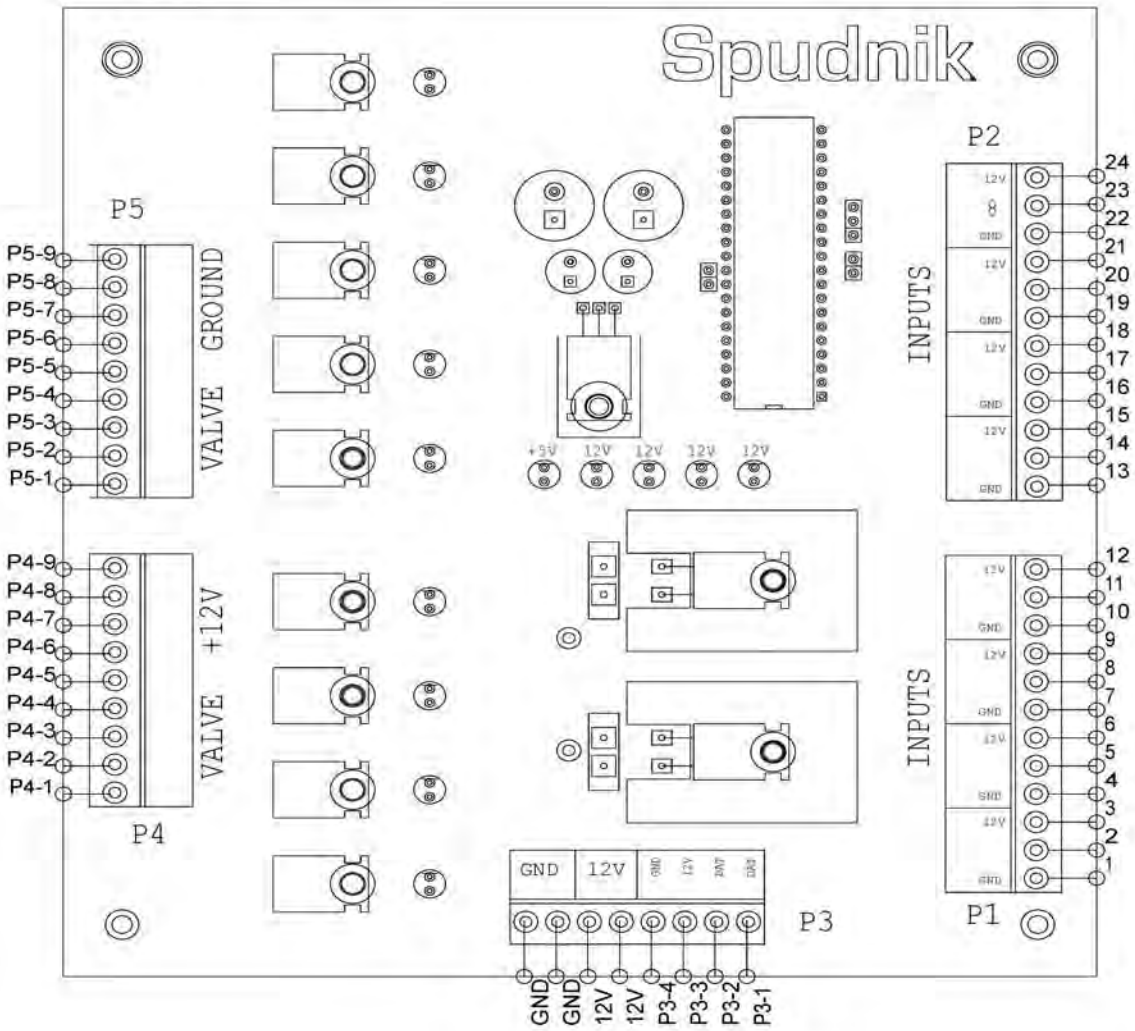
B.To change from the current setting, push and hold the delay button. The lights will change to the next higher position, such as from 4 to 6, or 6 to 8, or from 8 wraps around back to 4. Each push will advance the lights one position. If the light is on the number desired, release the "DELAY" button and push the "CHEMICAL" button. The number you have selected is stored in permanent memory, but may be changed as above if needed.

Chart 2:

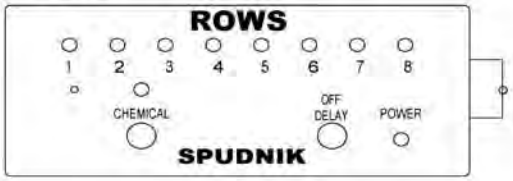
Rows Planting	Display Light
4	4
6	6
8	8

4 Rows Displayed

-PCB1
450130



450152



CABLE HARNESS
402760 W-HARNESS,8040/8060-LOW-05-CURRENT
402761 W-HARNESS,8080-EXT-LOW-05-CURRENT

LOW COST CONTROL TERMINAL

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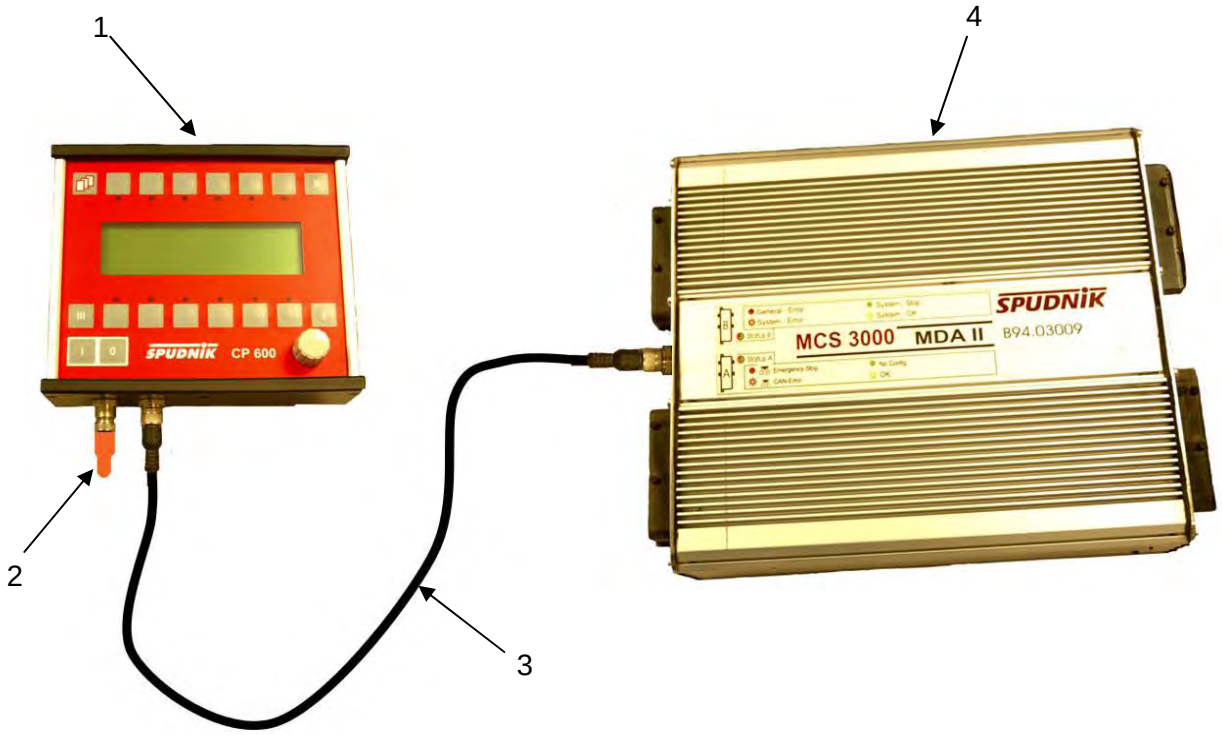
Parts Breakdown

The following diagram shows how the CP600 Control Box is connected to the MDA Processor.



CP600 Control Box

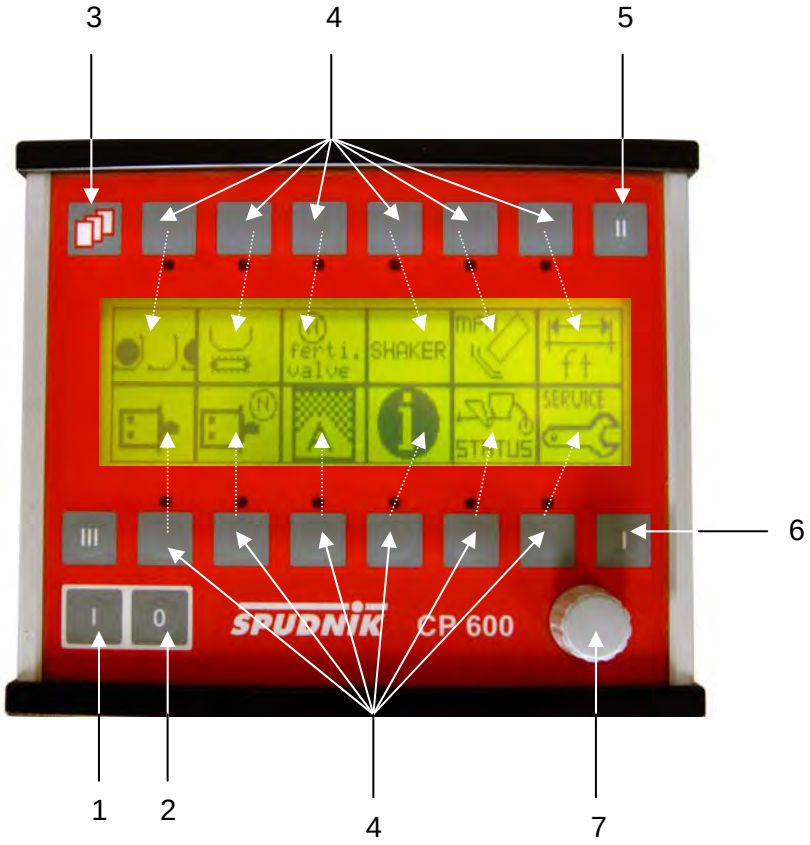
MDA Processor

Item #	Quantity	Part #	Description
1	1	450162	PLATER DISPLAY CP600
2	1	B94.01736	BUS-END PLUG M12x1,8p [x]
3	1	B94.01683	CAN BUS CABLE 80" (2M) M12x1 8-WIRE
or	1	B94.01685	CAN BUS CABLE 196"(5M) M12x1 8-WIRE
or	1	B94.01759	CAN BUS CABLE 315"(8M) M12x1 8-WIRE
4	1	B94.03009	MDA-MAIN ELECTRONIC

CP600 Buttons and Functions

This section will explain the buttons on the CP600 and their functions

Note: The display is not a touch screen. The dashed arrows indicate which icon the function buttons correspond with.

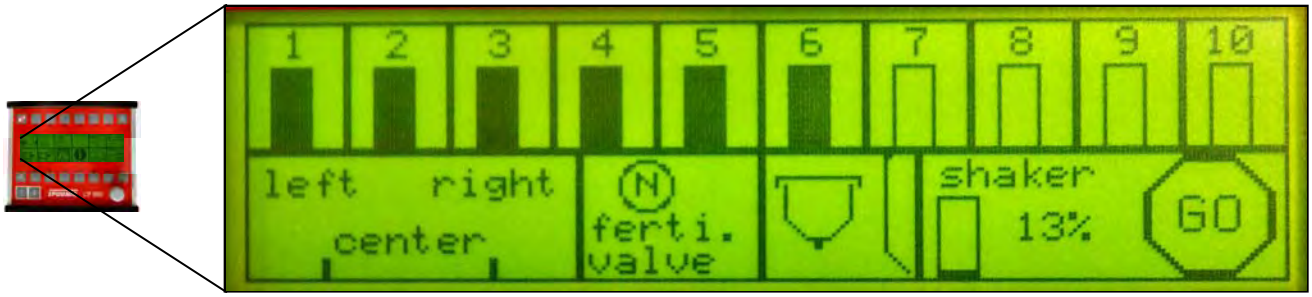


Item #	Function	Description of Function
1	On Button	Provides the power to the control box
2	Off Button	Terminates the power to the control box
3	Menu Button	Allows user to move from the previous menu to the next menu
4	Function Buttons	Use these buttons to choose an icon on the display screen. These icons, when chosen, will take you to that specific function's settings. **(the function button corresponds with the icon that is directly above/below it)**
5	Scroll Up	Scrolls up through options of a specific menu
6	Scroll Down	Scrolls down through options of a specific menu
7	Control Dial	Use this for changing settings. **(Note: Some settings may require contacting a Spudnik technician to be changed)**

Initial and Default Screens

When power is turned on, this screen will display briefly.

After the previous screen, you will see the default screen:



•When left on any other screen for approximately 8 seconds, the display will default back to this screen.

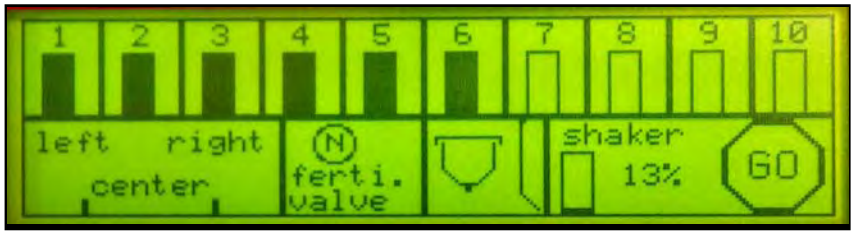
•If the skip detection alarm is triggered, this screen will be displayed, unless your are in a deeper menu at the time of the alarm triggering.

•From this screen, press the menu button to be taken to the main menu.

•Once an alarm is triggered, the buzzer will sound for an adjustable amount of time. If the error is not resolved, the symbol will remain on the screen, and the buzzer will not sound again. **(you may scroll through the alarm screens by pressing the scroll up button while in the default screen.)**

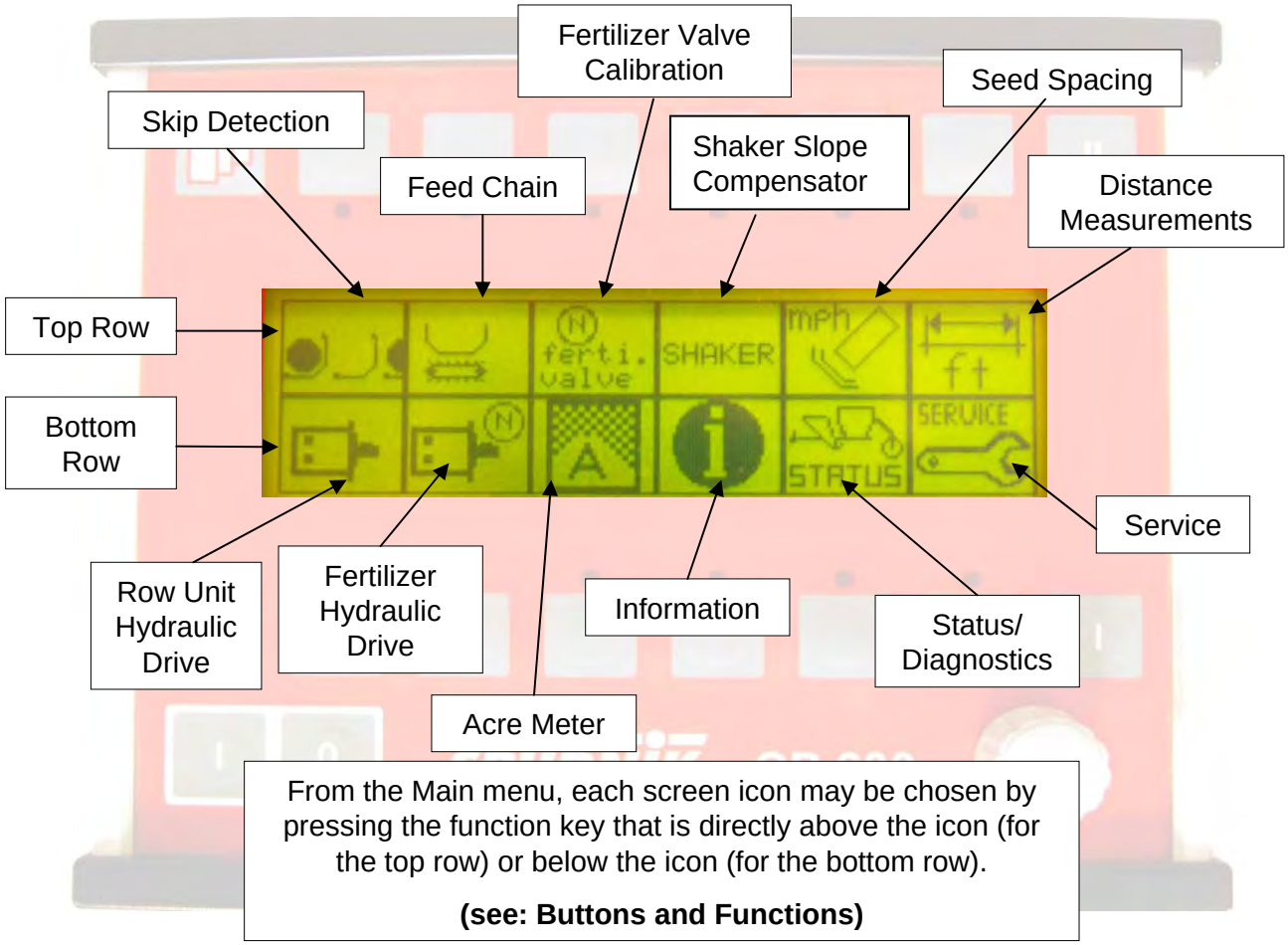
Moving from Default Screen to Main Menu

Default Screen



While in the Default Screen, press the Menu Layers button once to go to the main menu.

Main Menu



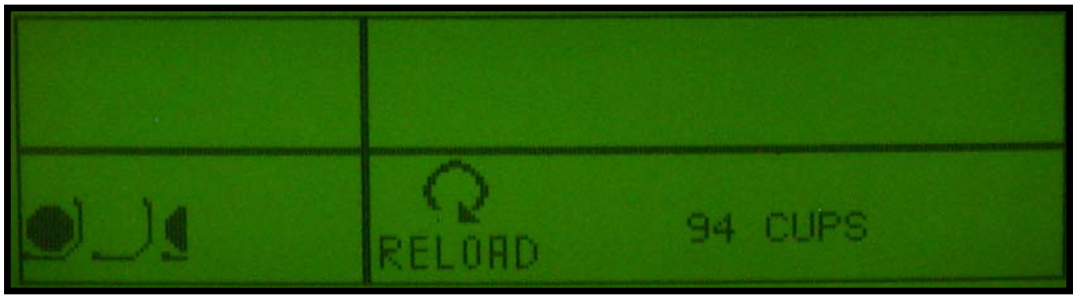
From the Main menu, each screen icon may be chosen by pressing the function key that is directly above the icon (for the top row) or below the icon (for the bottom row).

(see: Buttons and Functions)

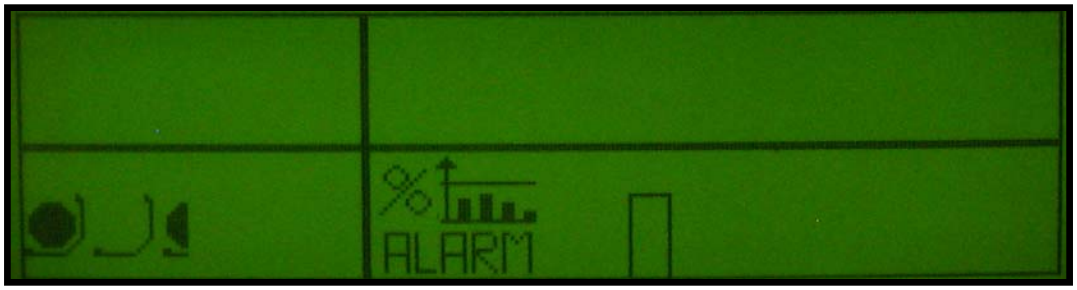
Skip Detection

(To change this setting, refer to password section or contact a Spudnik Technician)

1) The reload on cups should be 94 for red or green cups and 111 for blue cups

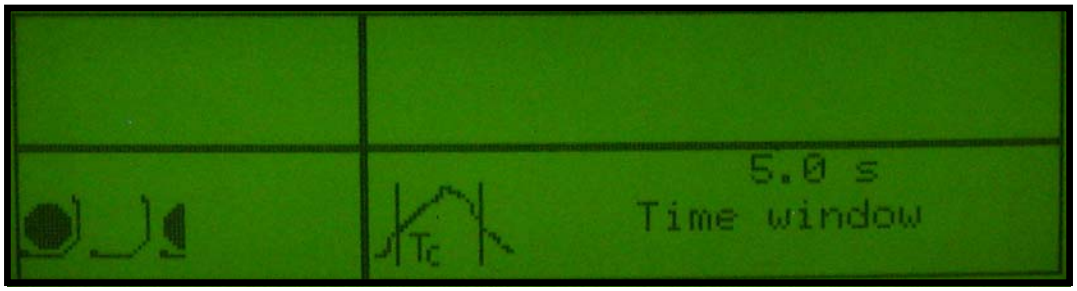


2) This is the alarm level which will trigger an alarm based on the skip detection level.



3) This is the amount of time the alarm beep will sound for

4) This is the maximum time frame allowed for skip detection before an alarm sounds.

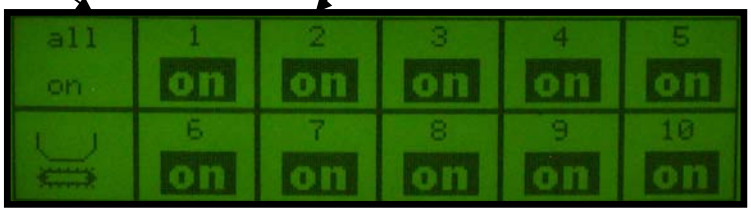


Feed Chain

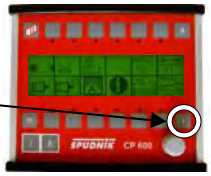
After choosing the Feed Chain icon, you will see this display:

If one or more of the seed chains are **OFF**, by choosing this icon, all feed chains will switch to **ON**.

By pressing the function button directly above the feed chain icon, you will control whether that chain is **ON** or **OFF**.

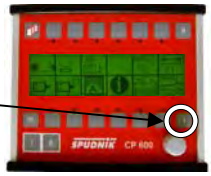


Press the scroll down button once to view the next display



This screen is not used.

Press the scroll down button once to view the next display



(Continued on the next page)

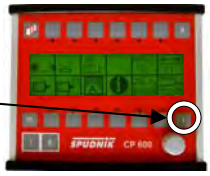
Feed Chain

(Continued from the previous page)

This portion of the display indicates the chain maximum on time. This displays how many seconds the chain may run before an alarm will be triggered (Default is 8 seconds). This alarm being tripped indicates that there could be a bridge problem, where the potatoes are not able to fall onto the seed chain, or the hopper could be out of seed.

(To change this setting, refer to password section or contact a Spudnik technician.)

Press the scroll down button once to view the next display



This portion displays the maximum chain pause time. This displays the amount of time the chain may stay paused before an alarm is triggered, and the buzzer sounds (Default is 80 seconds).

(To change this setting, refer to password section or contact a Spudnik Technician)

Note: If this alarm keeps triggering, the problem may be: **1)** Dirty sensor, **2)** Shakers are so strong that they are shaking the seed out of the cup and falling back into the hopper, **3)** Driving so slow that the planter does not have time to plant the seeds that are in the hopper and allow the chain to fill it within 10 seconds (or the current setting), **4)**Turning around at the edge of a field may trip the alarm if it takes longer than 10 seconds (or the current setting).

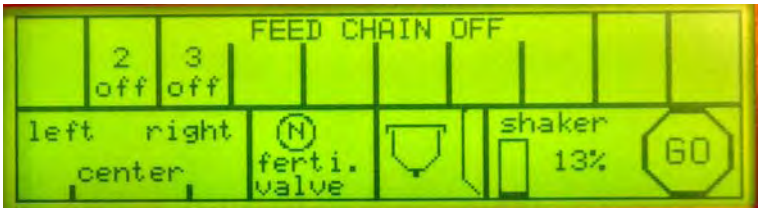
(Continued on the next page)

Feed Chain

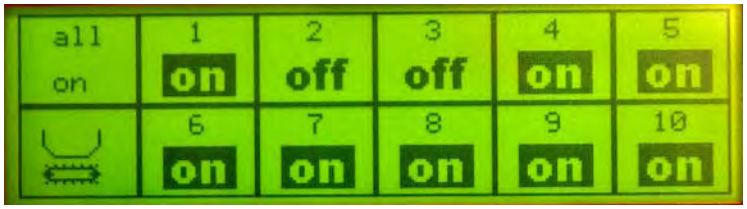
(Continued from the previous page)

This portion displays the amount of time the buzzer will sound for in the event of an alarm. (Default is 2 seconds).

(To change this setting, refer to password section or contact a Spudnik Technician)

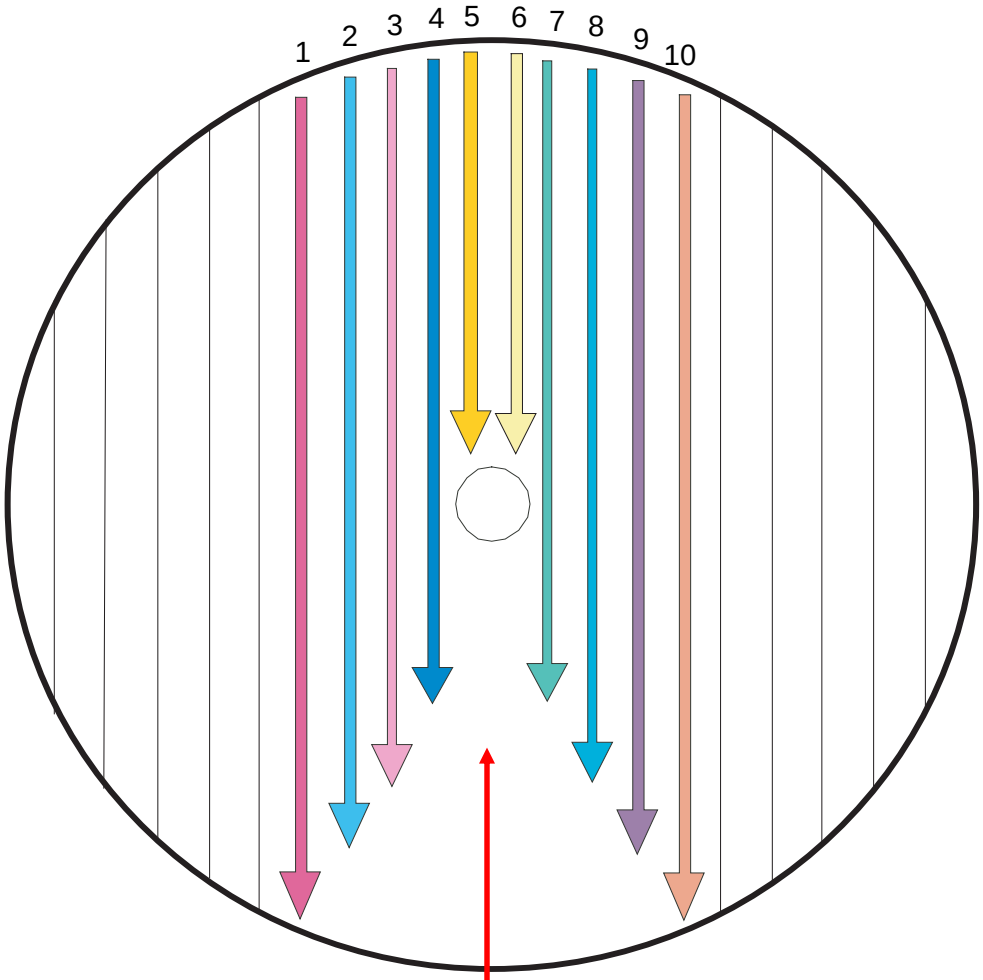


With Feed Chains turned off , an Alarm will sound if the working position of planter is changed (as in reaching the end of the Row) by raising the Planter cycling the Working Position sensor



Feed Chain Functions

The Feed Chains may be switched on or off individually. This allows you to leave a path to the center tower of pivots.

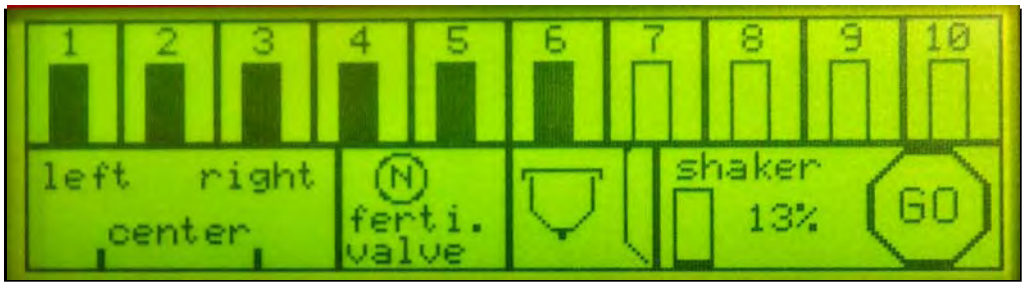


Note: The feed chain is the device that is turned on or off. This means that the belt with the seed cups will continue to plant seed until the hopper it pulls from is empty. Therefore, the feed chain must be turned off in time so that the cups will not have seed by the time you reach your desired destination.

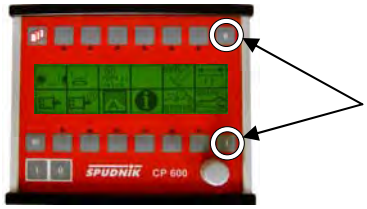
Fertilizer Valve Calibration

To set Fertilizer Valves, follow the steps below:

1) To set the fertilizer valves you must make sure that the fertilizer valves are turned OFF and the stop sign symbol says, ‘STOP’. The symbol defaults to ‘GO’.

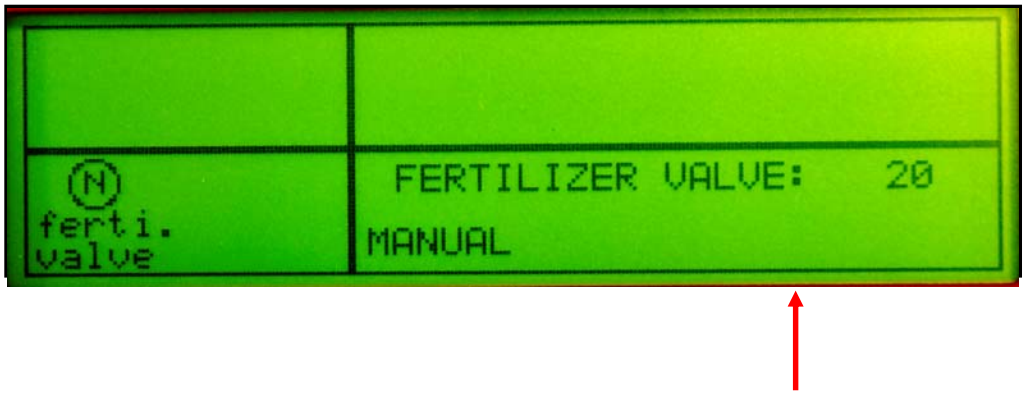


2) Select the, ‘Fertilizer Valves’ icon.



Note: use scroll buttons to navigate through screens

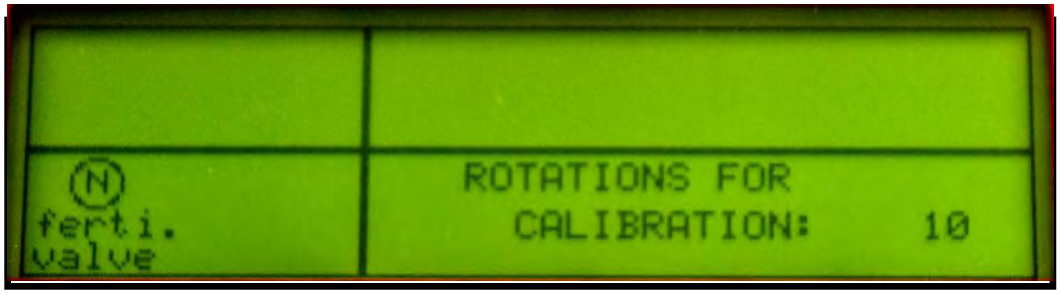
3) Fertilizer Value



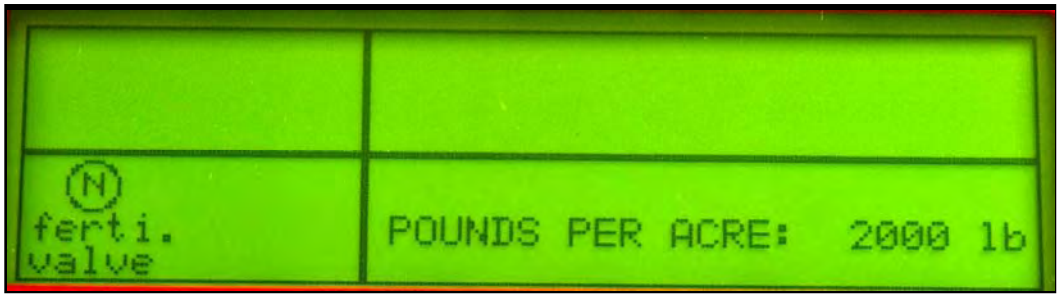
Fertilizer Valve Calibration

4) Shaft speed for calibration suggested # to begin with 2000. If the shaft speed during the calibration is too fast or slow adjust this value up or down.

5) The desired rotations for the calibration.

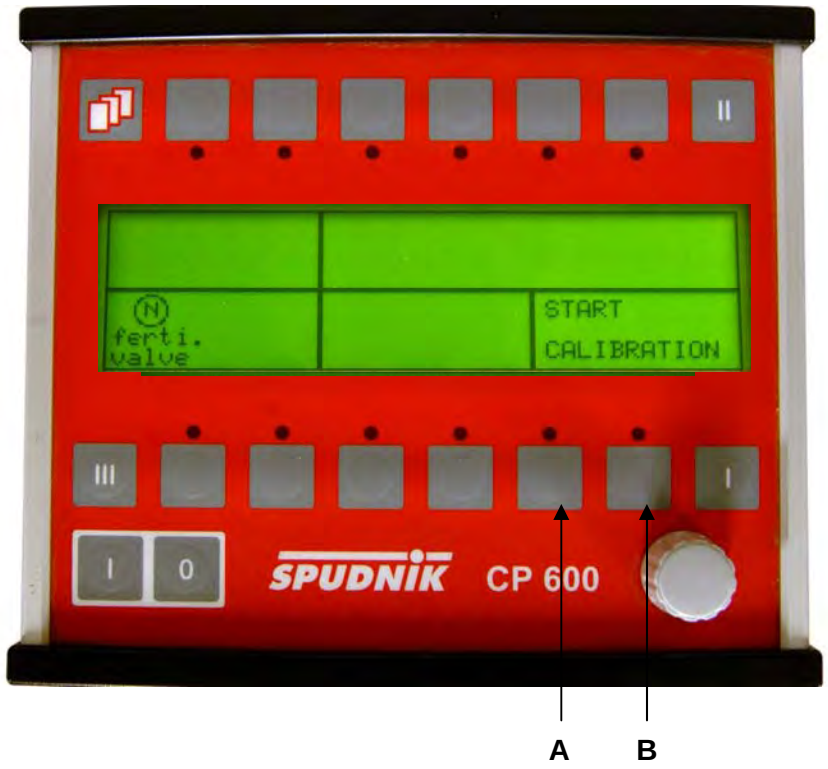


6) Desired application rate



Fertilizer Valve Calibration

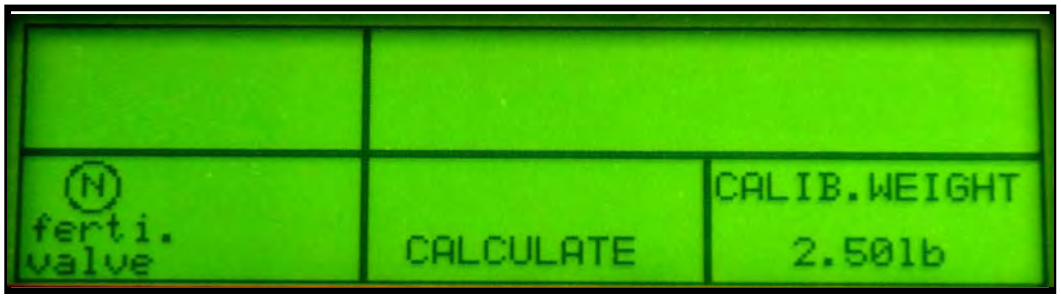
7) Select both A and B buttons to start calibration.



Note: Place bucket under one row unit to measure the weight of the fertilizer. Then multiply by the number of row units.

i.e. If you have a four row planter and measure the fertilizer weight brought out through the calibration from one row unit, you need to multiply the weight by four.

8) This screen is calculating the density

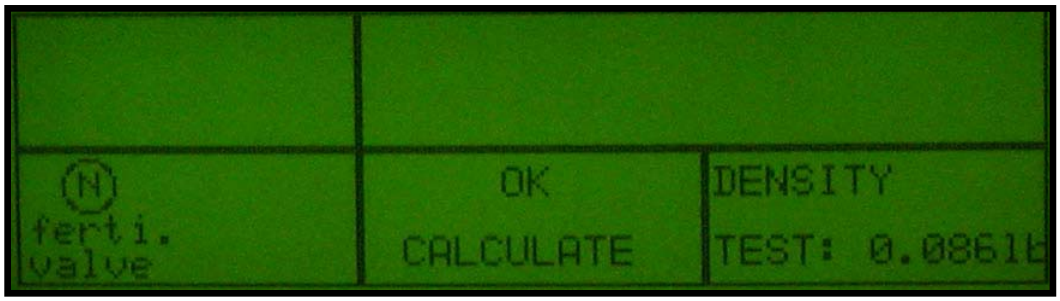


Note: The Density needs to be manually entered from the weight measurement taken. There is a minimum 2.40 lb and can not be set lower

Fertilizer Valve Calibration

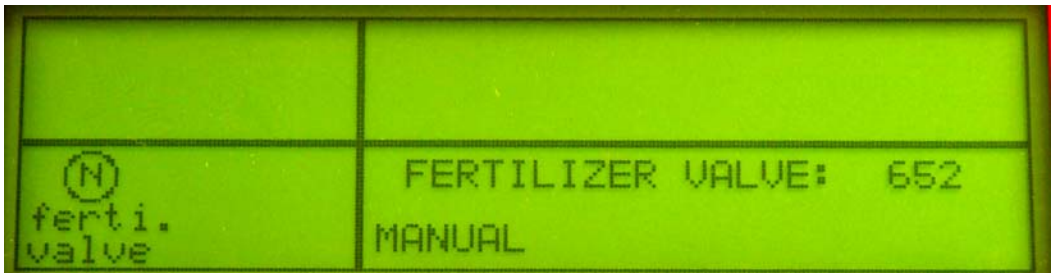
9) Select buttons A and B to calculate and make sure that the correct calibration has been set.

10) 'OK' means that the calculations are correct and finished.



11) Calculated Factor

To adjust (fine tune) press the two buttons below Manual. Lowering the # will reduce the amount per Acre

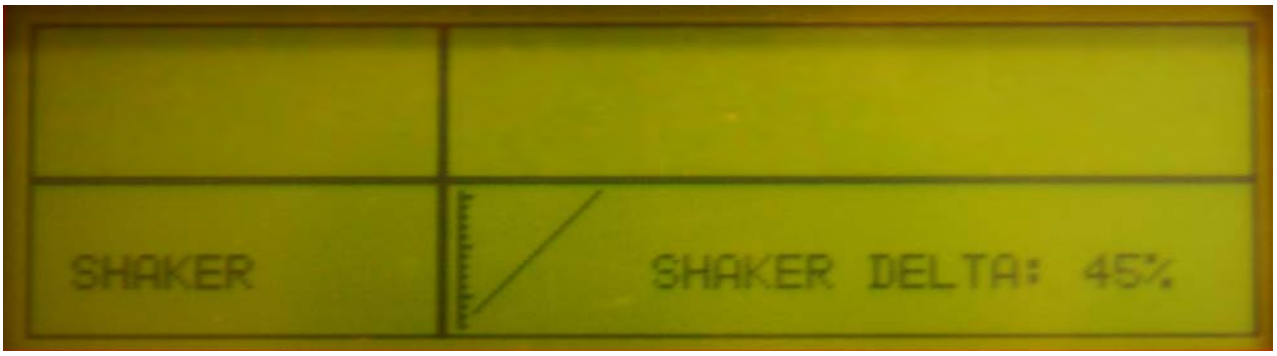


Shaker Setup

1, The Planter has to be at a stand still, stopped and on level Ground. The user Password of 11 has to be set. The primary Function Screen set to stop.

2, Scroll to next Screen. Select Shaker by pushing the Button above the word SHAKER

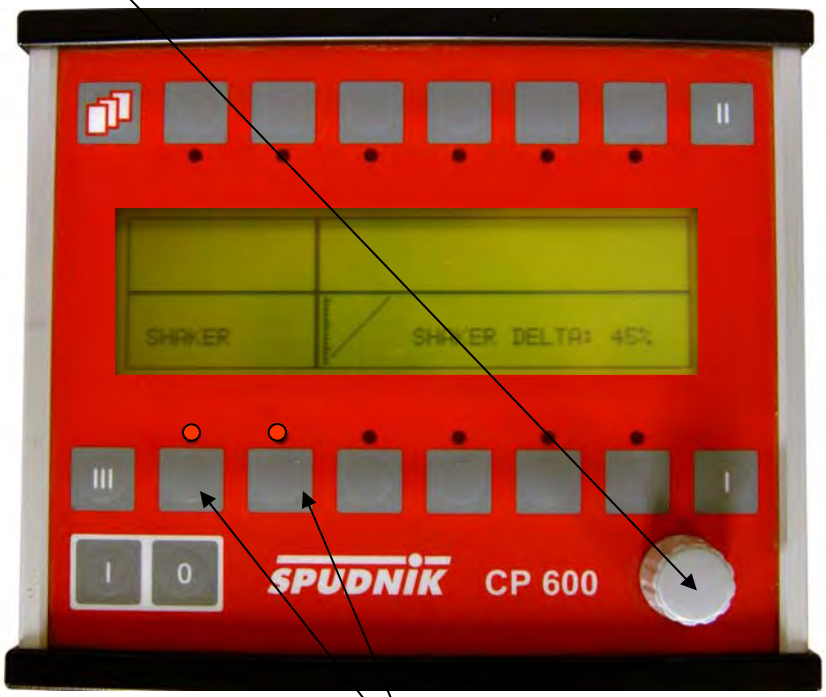
New Screen appears



Set Shaker % by turning Knob in lower right corner , If no change repeat steps 1 and 2 .

Note!!

Shaker delta is how aggressive the SHAKER responds to Slope Angle (Meaning uphill or down hill angle)

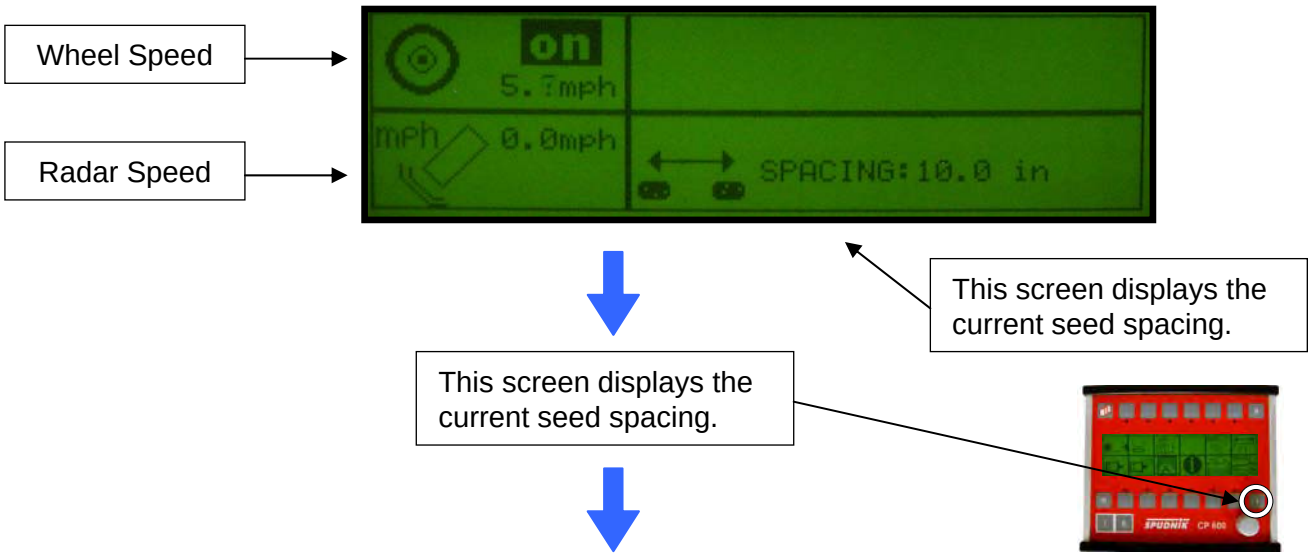


Push and hold simultaneously the two Buttons below the text word SHAKER on the Screen for 3 seconds to set Null (Level Ground) . Alarm will sound and the lights will light if Null is set and saved

Seed Spacing

The seed spacing is measured off of the wheel speed or the radar speed. (optional)

After choosing the seed spacing icon, you will see this display:



(Continued on the next page)

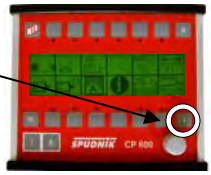
Seed Spacing

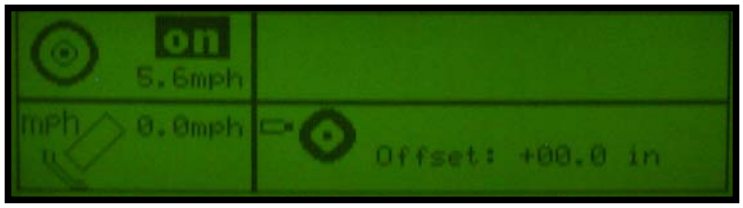
(Continued from the previous page)

If the radar speed is not reading correctly, it will need to have an offset entered. This display allows you to change the offset for the **radar.**

Note: If the difference in the speed of the wheel and the speed of the radar is greater than 20%, then an alarm will be triggered. In the event of this alarm being triggered, the machine will automatically switch to measure the seed spacing off of the wheel speed until the error is resolved.

Press the scroll button once to view the next display



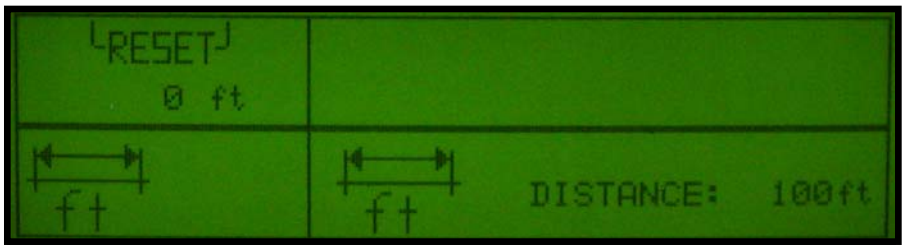


In case of slippage, different size tires or wheels, etc., the wheel speed will need to have an offset entered. This display allows you to change the offset for the **tires.**

Distance Measurements

The Distance Measurements menu is used for setting up the Chemical boxes and also measuring the tire circumference.

After choosing the Distance Measurements icon, you will see this display:



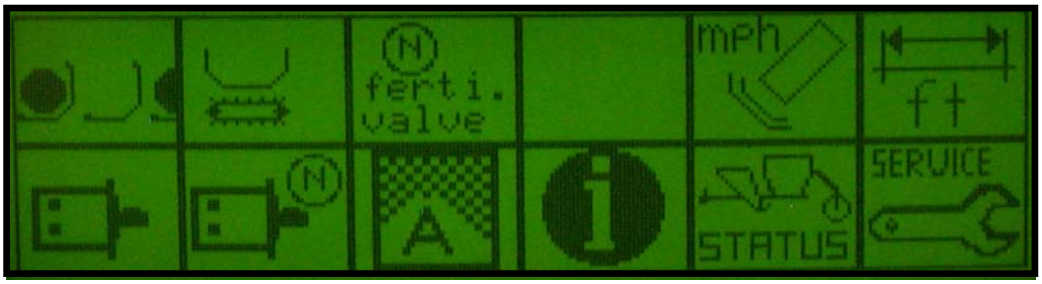
This number is the calibration distance. By turning the dial on the lower right hand corner to the CP600, you may change this distance.

Hydraulic Drive

To set up the hydraulic drive configuration requires a password and extreme CAUTION. All machines are set-up at the factory. **Make note of factory settings before changing**.

Note: Manually running the hydraulic drive does not require a password, skip to #3

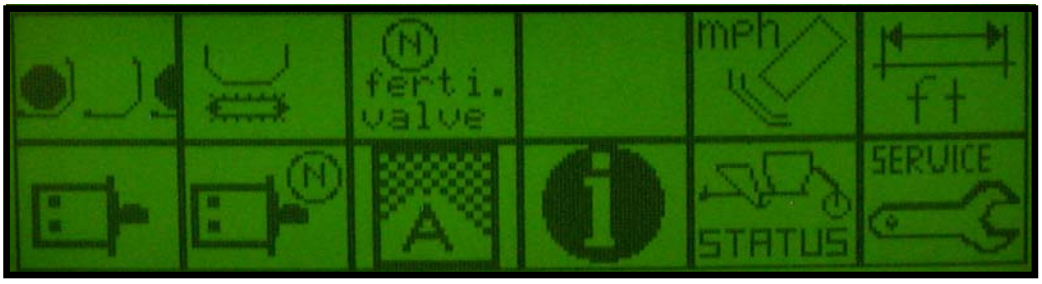
1) Select the 'SERVICE' icon.



2) Refer to the password section to modify the system parameters. Use extreme caution when modifying parameters! Write down the existing parameters before modifying.

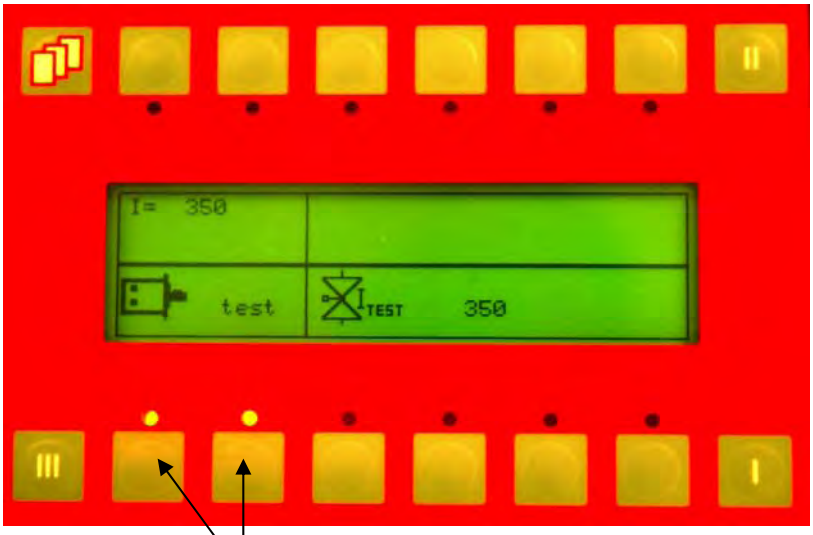
CAUTION:

3) Select the 'HYDRAULIC DRIVE' icon.



Hydraulic Drive

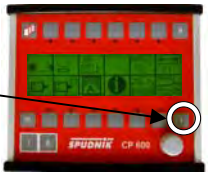
After choosing the Hydraulic Drive icon, you will see this display:

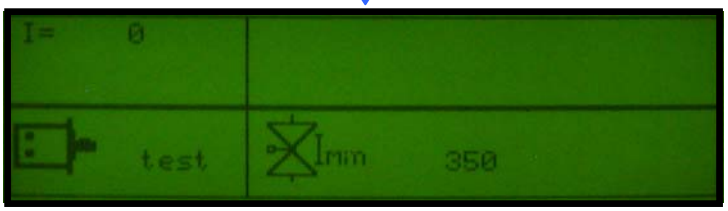


Press two Buttons to empty Bin

This value determines the speed that the row unit seed cups will run at.
This test is often run to empty the bin or clean the cups.

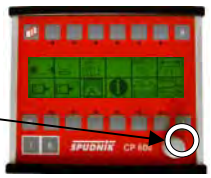
Press the scroll down button once to view the next display





This value is the slowest speed the cups should run at.

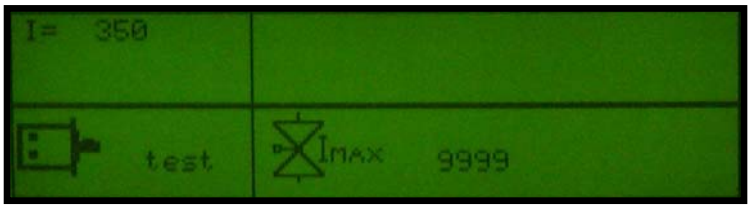
Press the scroll down button once to view the next display



(Continued on the next page)

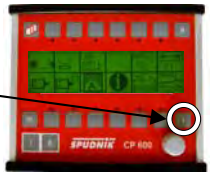
Hydraulic Drive

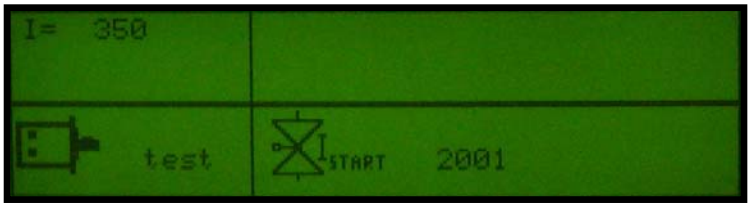
(Continued from the previous page)



This value is the fastest speed the cups should run at.

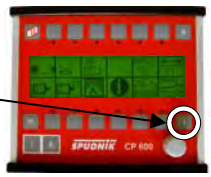
Press the scroll down button once to view the next display





The start value is typically about 2000. this is when the valve is about 20% open.

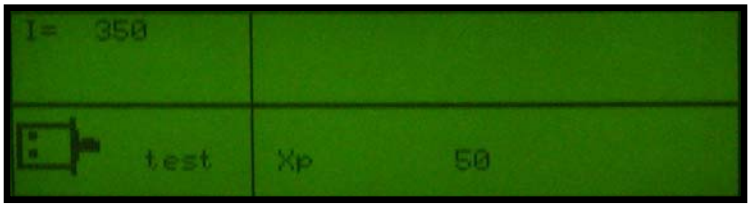
Press the scroll down button once to view the next display



(Continued on the next page)

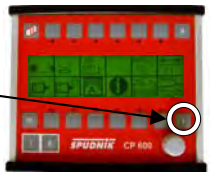
Hydraulic Drive

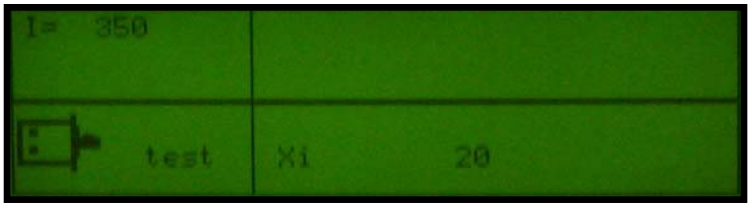
(Continued from the previous page)



The proportional value is 40-50. On 2006 machines they will be factory set to 50.

Press the scroll down button once to view the next display





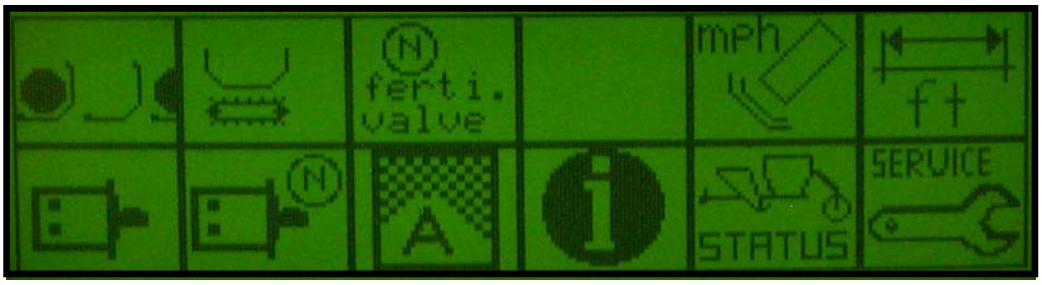
The integration factor value for all machines is 20.

Fertilizer Hydraulic Drive

To set up the hydraulic drive configuration requires a password and extreme CAUTION. All machines are set-up at the factory. Make note of factory settings before changing.

Note: Manually running the hydraulic drive does not require a password, skip to #3

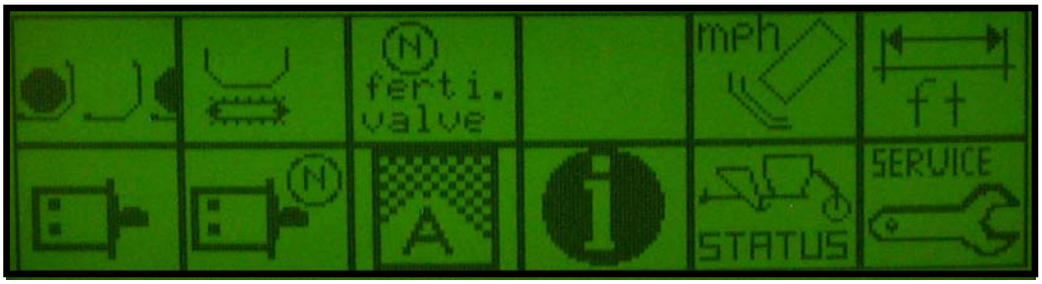
1) Select the 'SERVICE' icon.



2) Refer to the password section to modify the system parameters. Use extreme caution when modifying parameters! Write down the existing parameters before modifying.

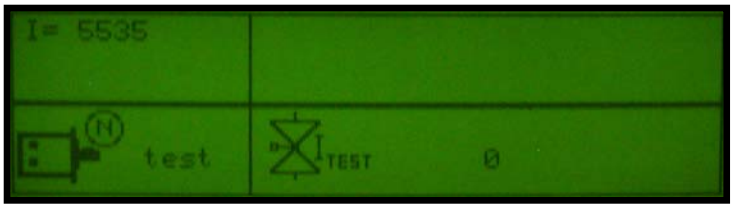
CAUTION:

3) Select the 'FERTILIZER HYDRAULIC DRIVE' icon.



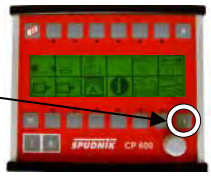
Fertilizer Hydraulic Drive

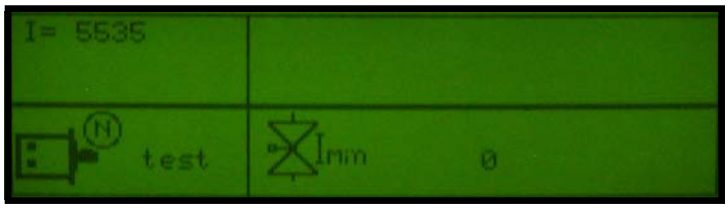
After choosing the Fertilizer Hydraulic Drive icon, you will see this display:



This value determines the speed that the fertilizer box valves will run at.
This test is often run to empty the bin or clean the cups.

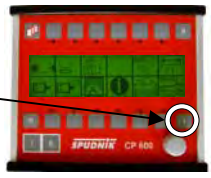
Press the scroll down button once to view the next display





This value is the slowest speed the valves should run at.

Press the scroll down button once to view the next display



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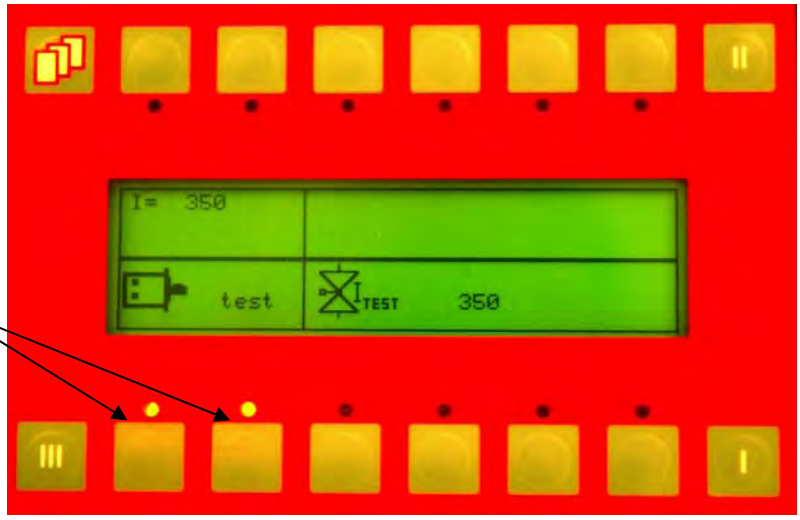
Fertilizer Hydraulic Drive

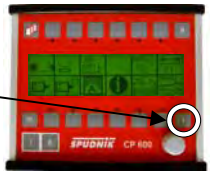
(Continued from the previous page)

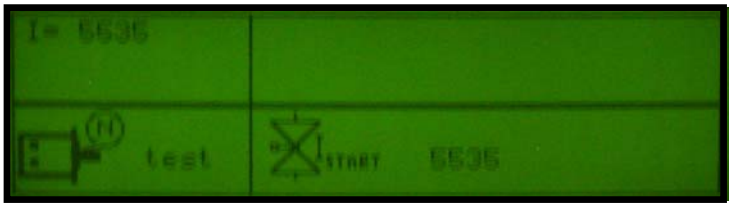


Two buttons
for test mode

This value is the fastest speed the valves should run at.

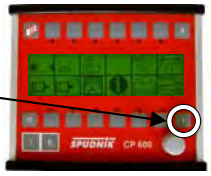
Press the scroll down button
once to view the next display





The start value is typically about 2000. this is when
the valve is about 20% open.

Press the scroll down button
once to view the next display



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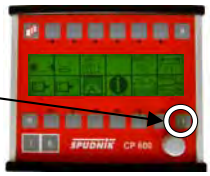
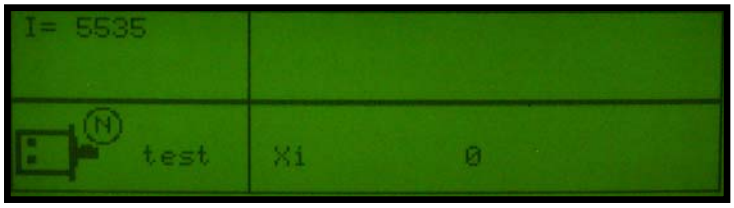
Fertilizer Hydraulic Drive

(Continued from the previous page)

The proportional value is 40-50. On 2006 machines they will be factory set to 50.

Press the scroll down button once to view the next display





The integration factor value for all machines is 20.

Acre Meter

After choosing the acre meter icon, you will see this display:

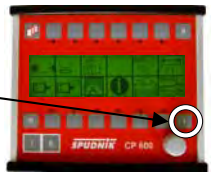
Acres are measured in 10 acre intervals.

Press the function buttons above the resets to reset the value.

This section displays how many acres have been planted.

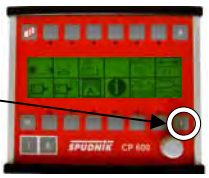
This section displays the number of seed per acre being planted.

Press the scroll down button once to view the next display



This section displays the current row spacing.

Press the scroll down button once to view the next display



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Acre Meter

(Continued from the previous page)

This is the circumference of the tire that the sensor is on. The sensor could be placed on either the front or the rear wheel of the machine.

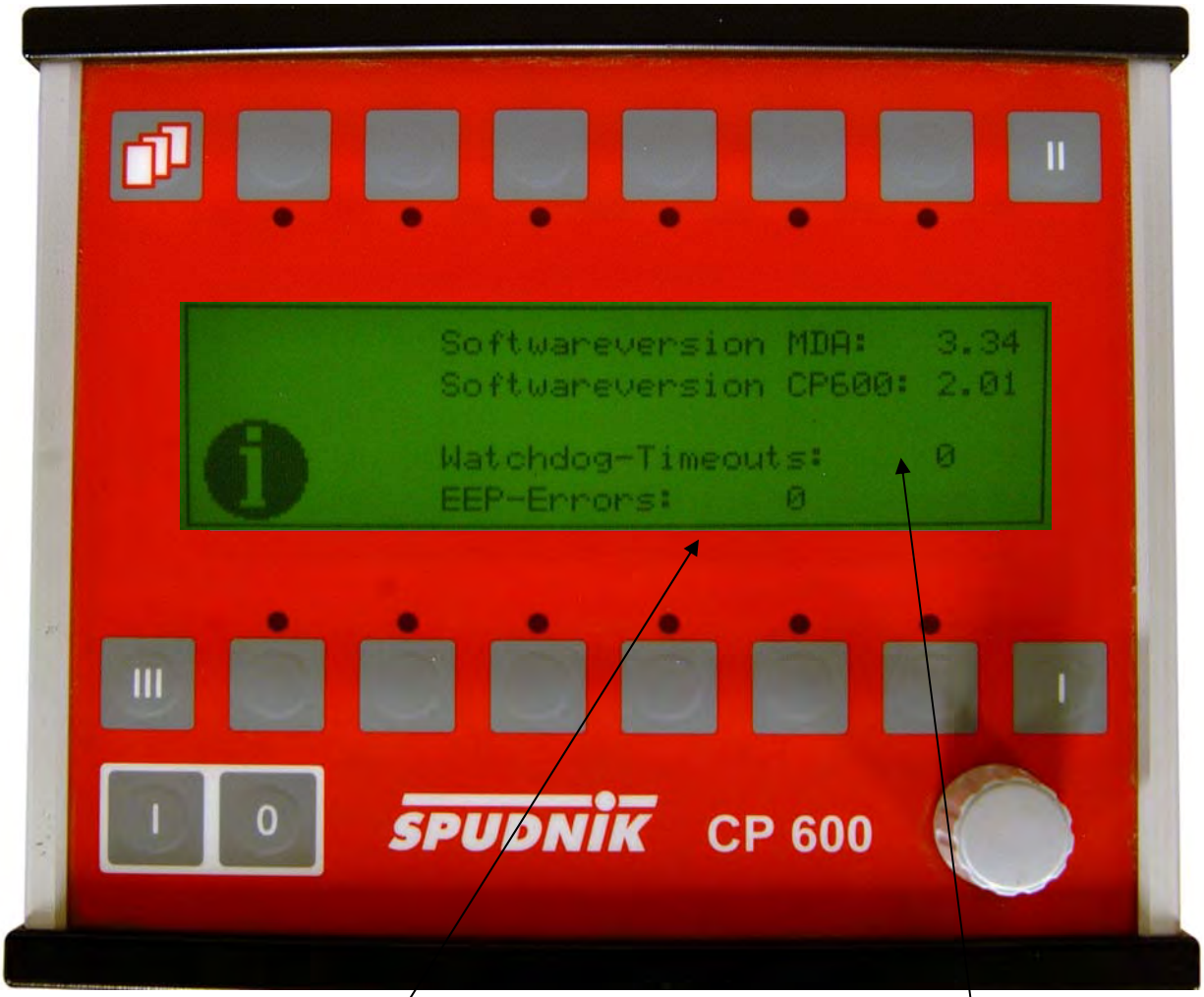
Factory Circumference Settings	
Tire Nomenclatures	**Circumference**
Front Tire 11.25x24	
Rear Tire 11.5x24	
Rear Tire 12.5x16	
Rear Tire 14.9x24	

Note: The tire circumference listed above is figured only theoretically. The practical measurement must be determined by the customer (operator). This can be done by,

1. Loading the hopper only half full
2. Place a mark or a marker on the tire with the sensor.
3. Plant ten revolutions of the tire.
4. Measure start to stop distance.
5. Dividing the distance by ten will give an accurate circumference value for the CP600

Information

After choosing the information icon, you will see this screen displayed:



This section displays the errors that have occurred.

This section displays the software versions in the MDA box, and also the CP600

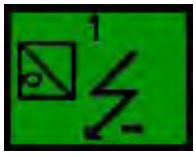
Status/ Diagnostics

The Status/ Diagnostics section allows you to monitor specific sections of the machine.

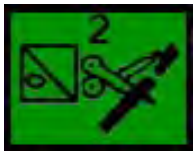
The following describes each icon's meaning:

This icon indicates an okay, open circuit status.

This icon indicates an okay, closed circuit status.



This icon indicates a short circuit to ground.



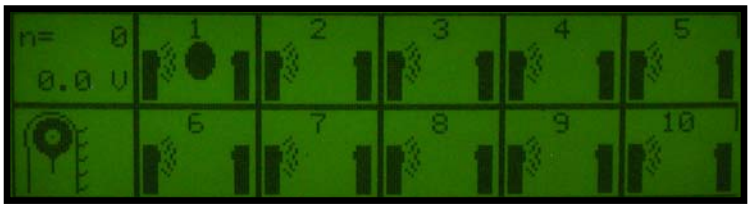
This icon indicates a broken wire.

Status/ Diagnostics

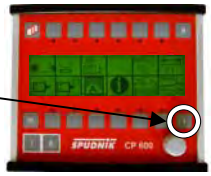
After choosing the Status/ Diagnostics icon, you will see this display:

The following screens display the status of the described area of the machine.

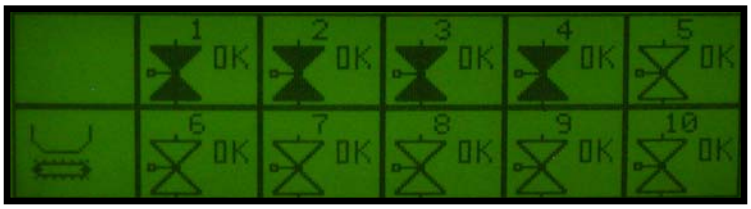
This section displays the sip detection status.



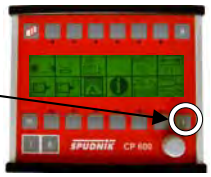
Press the scroll down button once to view the next display



This section displays the feed chain status.



Press the scroll down button once to view the next display

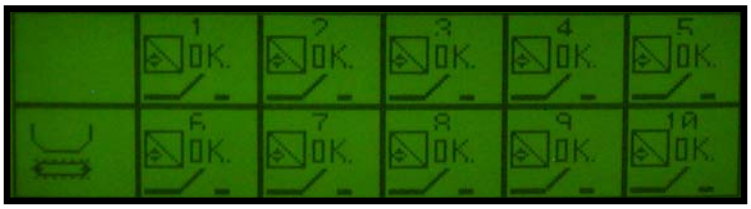


(Continued on the next page)

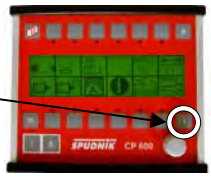
Status/ Diagnostics

(Continued from the previous page)

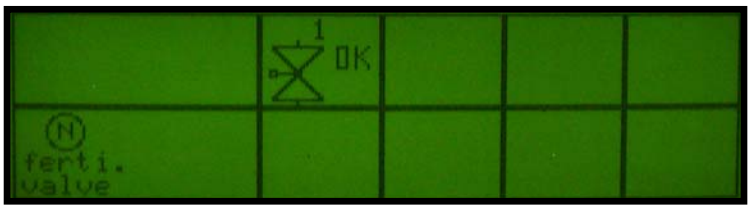
This section displays the feed chain status.



Press the scroll down button once to view the next display



This section displays the fertilizer valve status.



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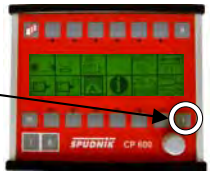

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Status/ Diagnostics

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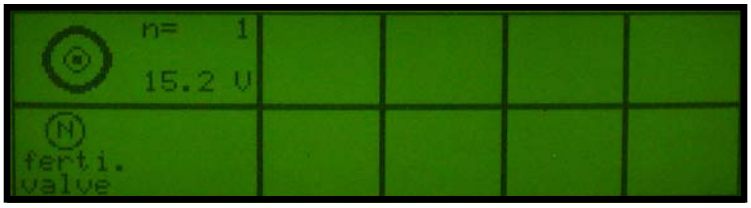
This section displays the dry fertilizer box encoder status of the clutch.



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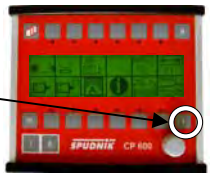
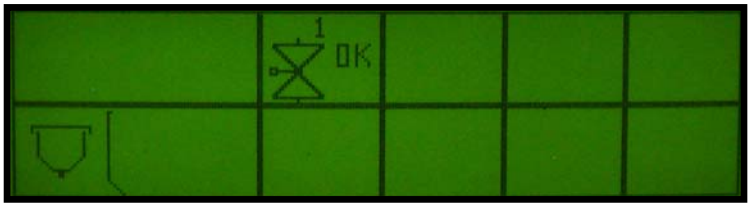


This section displays the chemical box clutch status.



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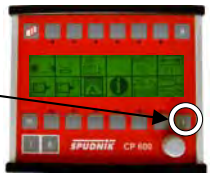

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Status/ Diagnostics

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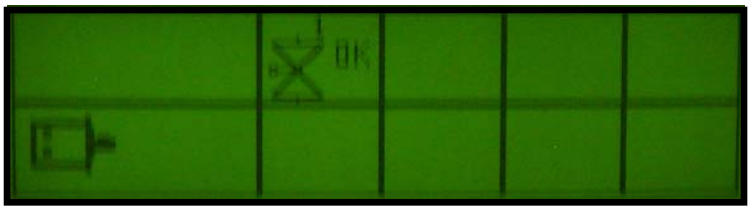
This section displays the hydraulic motor status.



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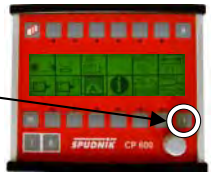
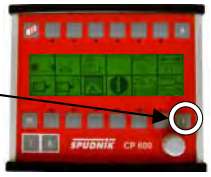


This section displays the impulses from the belt, wheel, the radar, and the working position sensor status.

Press the scroll down button once to view the next display



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Status/ Diagnostics

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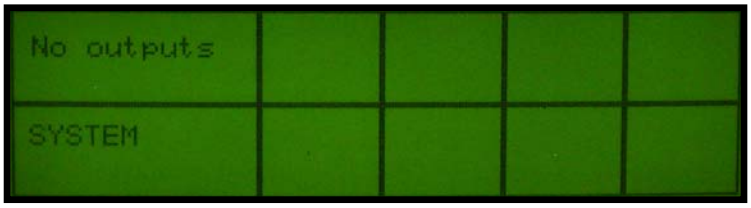

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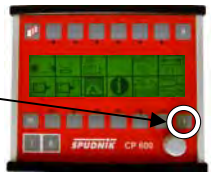

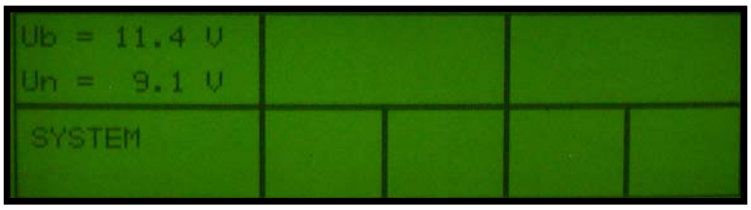

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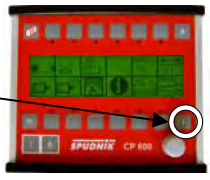

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Status/ Diagnostics

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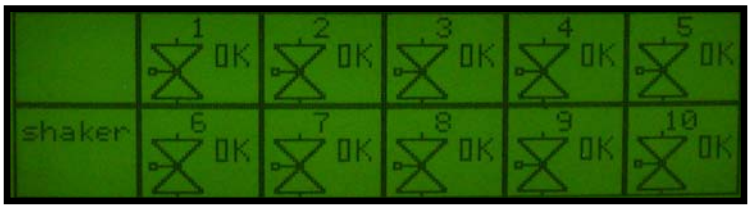

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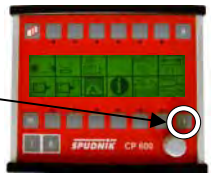
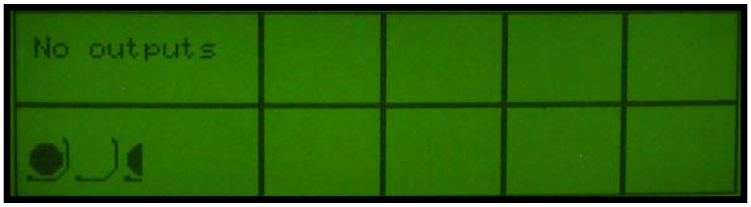




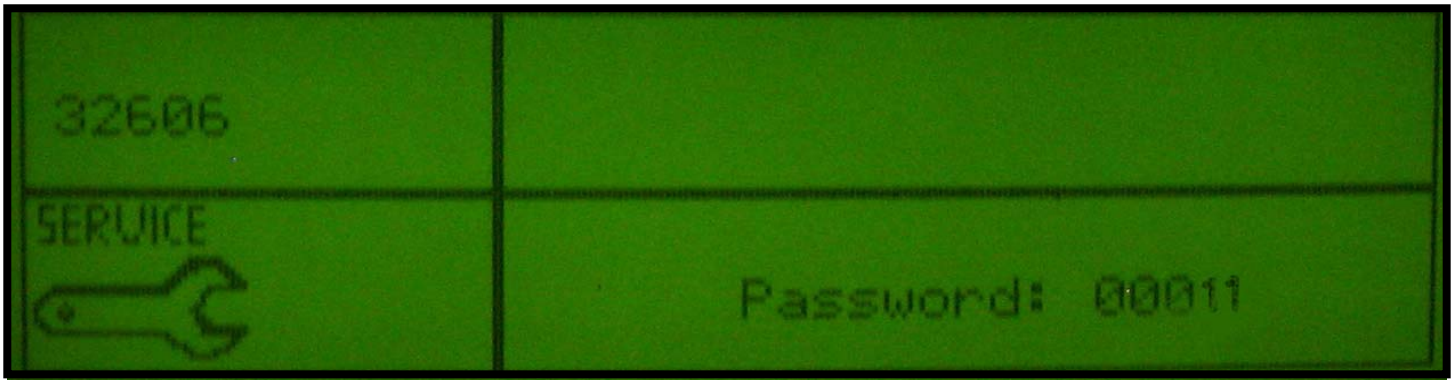
Storage

The CP600 should be stored in a dry storage place away from moisture and damp areas.

Keep the CP600 away from areas with excessive dust.

Password

The password for changing **parameters** in the CP600 is 11



Note: To get back out of password mode restart CP600 by turning OFF and back on again.

Parameter Settings

Use the open boxes below to make NOTE of the default parameter settings before changing.

Hydraulic Row Unit Drive

Spudnik Adjustments	Factory Specs. Name & Date	Service Adjustments Service 1 Name & Date	Service Adjustments Service 2 Name & Date
Tire Circumference			
Row Spacing			
I min			
I max			
I start			
Xp			
Xi			
Reload			

Parameter Settings

Use the open boxes below to make NOTE of the default parameter settings before changing.

Hydraulic Fertilizer Drive

Spudnik Adjustments	Factory Specs. Name & Date	Service Adjustments: Service 1 Name & Date	Service Adjustments: Service 2 Name & Date
I min			
I max			
I start			
Xp			
Xi			

Maintenance

General safety instructions

Regular maintenance is a prerequisite for operational reliability. The following safety advice is to be observed during any maintenance, cleaning or repair work.

To prevent accidents, all relevant rules and regulations concerning safe and competent working must be observed!

•Observe the adjustment, maintenance and inspection activities and intervals specified in this operating manual, including details concerning the replacement of parts, subassemblies and equipment. These activities may only be executed by trained personnel.

•Instruct operating personnel before beginning special operations and maintenance work! Delegate a supervisor!

•Always observe the relevant safety measures and instructions specified in the operating manual when carrying work related to the operation, adaptation, conversion or adjustment of the machine as well as maintenance, inspection and repair activities.

•Ensure the working area is adequately secured during the maintenance work!

•Use suitable, tested tools when working on the machine, only use proper tools for unscrewing and tightening screwed connections. Wear gloves!

•Switch off the machine completely before maintenance and repair work and ensure that it is secured against inadvertent starting. The machine must not be switched on again while the work is being carried out!

-Switch off operating facilities.

-In the case of tractors, self-propelled harvesting machines and engine-driven machines, switch off the engine, remove the ignition key and, if necessary, lock the cabin. Nobody is allowed to be within reach of the controls so that functions cannot be switched on again by accident.

-Switch off the main switch and attach a warning sign, if necessary.

-Disconnect the machine from the power supply. Depressurize the hydraulic system and compressed air lines and disconnect them from the supply.

•Carry out maintenance and repair work only when the machine is positioned on firm and level ground and has been secured against inadvertent movement and toppling.

•When replacing individual parts and larger subassemblies, they should be carefully attached to lifting gear and secured against falling down. To avoid the risk of accidents, sharp edges, corners and dangerous projections must be covered and a warning sign attached. Use only suitable hoisting and lifting gear with adequate load capacity which is in a proper working condition. Never work or stand under suspended loads!

•The securing of loads and the instruction of crane operators should only be entrusted to experienced persons. A signaler giving instructions must be within sight of the crane operator and must be provided with a radio link.

•Only carry out overhead assembly work using suitable ladders and platforms. Never climb on the machine itself! Wear a safety harness when carrying out maintenance work at greater heights.

•Keep all handles, steps, handrails, platforms, landings and ladders free from dirt, snow and ice.

Maintenance

•Clean the machine, especially connections and threaded unions of any traces of oil, fuel or preservatives before carrying out maintenance/repairs. Never use aggressive detergents. Use lint-free cleaning cloths.

•Before cleaning the machine with water or steam jets (high-pressure cleaners) or other cleaning agents, cover or tape all openings which – for safety and operational reasons - must be protected against ingress of water, steam or leaning agents. Special care must be taken with electric motors and switching cabinets, as well as all additional electrical or electronic components. After cleaning, remove all covers and tape completely.

•After cleaning, examine all fuel, lubricant and hydraulic oil lines for leaks, loose connections, scuffing marks and damage,. Any defects found must be rectified without delay.

•Immediately retighten any screwed connections that have been unscrewed during maintenance and repairs.

•Any safety devices removed for setting-up, maintenance or repair purposes must be refitted and checked immediately upon completion of the maintenance and repair work.

•Ensure that all fuels, consumables and replaced parts are disposed of safely and with minimum environmental impact.

Maintenance

Special safety instructions

Safety devices

Never stand beneath suspended loads!

Never stand or work beneath suspended loads!

Engage safety catches!

Never stand or work beneath suspended loads. The figures below show special safety devices for supporting loads.

Adjustment and maintenance work on these parts of the machine may only be carried out with the safety devices engaged.

Maintenance

Spare parts procurement

Please quote the details on the type plate(s) as well as the machine's serial no. on every order for spare parts or accessories, or inquires of a technical nature.

The use of spare parts supplied by third parties Is prohibited. Original spare parts and accessories approved by the manufacturer are a contribution to safety and guarantee proper functioning. No liability can be taken for consequences resulting from the use of other parts.

When replacing electrical or hydraulic parts, ensure that only original SPUDNIK spare parts are used. The use of non-SPUDNIK parts can cause malfunctioning of the machine.

Type plate on machine

Machine serial number

The machine serial no. is punched into a plate on the frame.

The entire designation has the status of a legal document and may not be removed, changed or rendered illegible!

Disposing of replaced parts

The following points should be observed before replacing or disposing of parts.

-Replaced parts which still function should be cleaned and stored in n orderly manner.

-Machine parts which cannot be repaired should only be disposed of at appropriate collecting points or be collected by a scrap metal dealer.

So called "valuable" materials should be deposed of in a proper way, i.e. plastics, rubber, scrap metal, etc. should be recycled.

Collect and dispose of old oil in accordance with the regulations.

Maintenance

Repairs to the electrical system may only be carried out by authorized dealers.

Exercise extreme care when working on engine or hydraulics – risk of serious burns!

In order to keep wear down to a minimum, clean the machine thoroughly inside and outside. Non-observance of the instructions can lead to malfunctions or premature wear. In this case the user carries sole responsibility for any damage which occurs.

To ensure the operational reliability of the machine, prevent accidents and avoid, damage, remove dirt, deposits and inflammable materials from the machine on a daily basis!

Only carry out cleaning work when the engine is switched off!

Remove the ignition key!

Secure the machine against rolling away!

Protect the electrical system from moisture and dirt. This particularly applies when cleaning high pressure cleaning equipment.

Cleaning after every operation

In order to deep wear down to a minimum, follow the instructions given below:

-Remove dirt, deposits and inflammable material from the machine on a daily basis.

-Inspect the machine for damage once a week and replace defective parts immediately

-Take note of and comply with the information regarding cleaning with high-pressure cleaning equipment.

The following figure show the parts of the machine, which must be cleaned after each use:

Maintenance

Parts to be cleaned

Cleaning with high-pressure cleaning equipment

Clean the machine thoroughly, inside and outside. Dirt attracts moisture and leads to corrosion. The following advice should be adhered to when using high-pressure cleaning equipment to wash down the machine:

Cleaning instructions:

During the first six weeks do not wash down the machine with high-pressure cleaning equipment.

Thereafter:

-Do not direct the jet of water at bearings.

-Do not direct the cleaning jet towards electrical/electronic components.

-Only use a wide-jet nozzle; machine nozzle clearance to be min. 600 mm (2ft).

-Always keep the wide-jet nozzle moving from side to side.

-Nozzle spraying angle min. 25degrees.

-Spraying pressure max. 1450 psi.

-Water temperature max. 68 degrees Fahrenheit.

-Do not use any cleaning additives.

Maintenance

Storage

Only carry out adjustments and maintenance work when the engine is switched off!

Remove ignition key!

Secure the machine against rolling away!

Secure machine against rolling away!

Engage parking brake and use wheel chocks!

Careful storage of the machine or the spare parts avoids repair costs and downtimes. At the same time, reliability and service life are improved

Make a note of all maintenance work to be carried out before the next season and arrange for this to be carried out in good time.

Your SPUDNIK dealer is in a better position to perform maintenance work and any repairs that may be necessary outside the season.

The instruction below should be followed at the end of the harvesting season:

Storage instructions	See section for further information
Clean the machine thoroughly. Dirt attracts moisture and leads to corrosion.	Cleaning the machine
Store the machine in a dry place. Do not store in the vicinity of artificial fertilizers (mineral).	---
Clean all drive chains thoroughly and spray them with chain spray in order to prevent corrosion.	Chain drive
Smear grease on all unpainted parts, the piston rods of all hydraulic cylinders and the threads of all spindles.	---
Check moving parts (hinges etc.) for ease of movement, dismantle if necessary, clean and check for signs of wear. Replace with new parts if necessary.	---
Grease the machine thoroughly.	Lubrication
Repair paint defects, protect any bare metal with a good coating to rust inhibitor.	---
Follow the instructions for engine storage in the case of self-propelled machines.	---

Maintenance

Screwed connections

Screwed connections in general

Only carry out adjustments and maintenance work when the engine is switched off!

Remove ignition key!

Secure the machine against rolling away!

The tightening torques given in the table below do NOT apply when a different torque is specified in this manual for a particular screwed connection. Check all nets, bolts and screws regularly for tightness. Shear pins are designed in such a way that they shear off at a certain load. When replacing shear pins, make sure that only pins of the same grade are used.

When replacing nuts and bolts, make sure that nut/bolt pairs are of the same or higher grade. Nuts, bolts and screws of a higher grade should be tightened with the same torques the original parts being replaced make sure that threads are clean and that they engage properly. This prevents damage upon tightening.

Torque Values = **inch-lbs**

Bolt Size	Torque	Bolt Size	Torque
2-56	2.0	7/16”-14	317.0
4-40	4.3	7/16”-20	357.0
4-48	5.4	1/2”-13	422.0
6-32	7.9	1/2”-20	443.0
6-40	9.9	9/16”-12	558.0
8-32	16.2	9/16”-18	615.0
8-36	18.0	5/8”-11	907.0
10-24	18.6	5/8”-18	1016.0
10-32	25.9	3/4”-10	1249.0
1/4”-20	61.5	3/4”-16	1220.0
1/4”-28	77.0	7/8”-9	1905.0
5/16”-18	107.0	7/8”-14	1895.0
5/16”-24	116.0	1”-8	2815.0
3/8”-16	192.0	1”-14	2545.0
3/8”-24	212.0	-	-

The tightening torques required are given in the adjacent table.

The strength grade is specified on the screw head.

Screwed connections with special maintenance requirements

Only carry out adjustments and maintenance work when the engine is switched off!

Remove ignition key!

Secure the machine against rolling away!

The following screwed connections require special maintenance. Non-compliance could result in damage to the machine or chassis.

Maintenance

Drawbar eye for hitch and Piton-Fix couplings

The screwed connection shown must be checked for tightness at the following intervals:

-Prior to the first use under load,

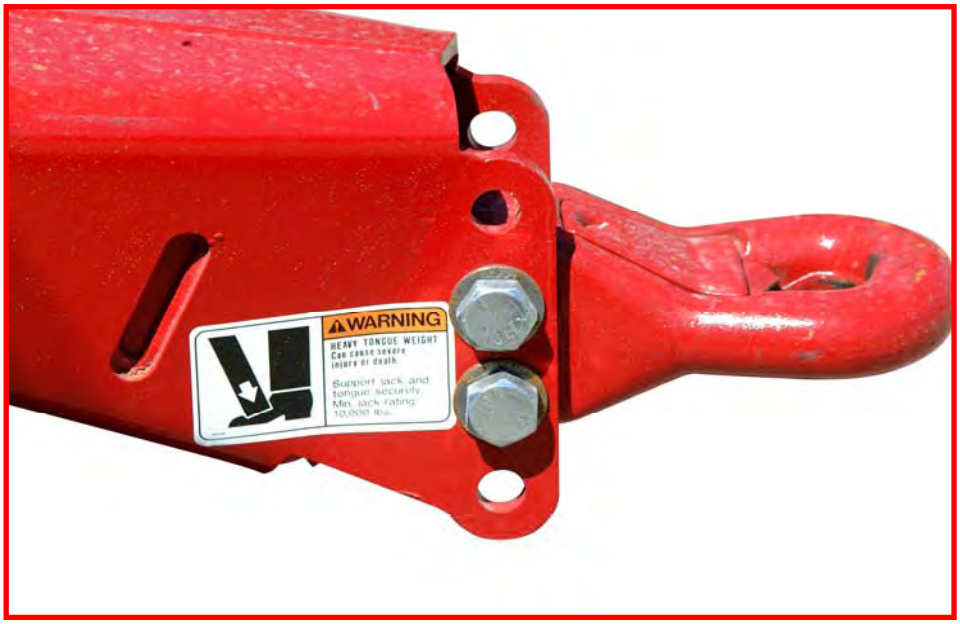
-After the first use under load,

-After 50 operating hours,

-After 100 operating hours,

-Thereafter, every 200 operating hours.

Type of bolt:	1” UNC
No. of bolt:	2
Tightening torque:	250 ft lb


WARNING
HEAVY TONGUE WEIGHT
Can cause severe injury or death.
Support jack and tongue securely.
Min. jack rating 10,000 lbs.

Maintenance

Chassis

Any adjustments or repairs to the chassis which are not shown here may only be carried out by an authorized dealer.

Non-compliance with this rule invalidated the guarantee.

The adjustments shown here may only be carried out when the engine is switched off!

Remove ignition key!

Secure machine against rolling away!

Never overload axles, brakes or chassis.

Loosen and tighten the wheel nuts in the sequence shown.

Note: Use a torque wrench to tighten the wheel nuts in the sequence shown!

Standard axle wheel nuts

The screwed connection shown must be checked for tightness at the following intervals:

-Prior to the first use under load,

-After the first use under load,

-After 50 operating hours,

-After 100 operating hours,

-Thereafter, every 200 operating hours.

No. of screws: 8

Maintenance

Tires

Repair work to the wheels may only be carried out by an authorized dealer.

Only work on the wheels when the engine is switched off!

Remove ignition key!

Secure the machine against rolling away!

Maintain the prescribed tire pressures and measure once a week (see technical specifications)

Check tire pressure daily (for 11.2-24/4 16 PLY tire – 54 P.S.I.)

(for 12.5L-16 PLY support wheel – 56 P.S.I.)

(for 18/8.50-8/4 gage wheel – 22 P.S.I.)

(for 11-1/4 x 24 diamond tread tire – 40 P.S.I.)

There is a risk of bursting if the tire pressures are too high!

Stand clear of the tires when pumping them up.

Check tire pressures regularly.

Tires with divided rim: Release tire pressure before attempting repairs!

When working on the wheels, secure the machine against rolling away (wheel chocks)!

Never work on machine which is supported only by a jack.

Make sure that the jack has adequate load-carrying capacity.

Maintenance

Chain drives

Only carry out adjustments and maintenance work when the engine is switched off!

Remove ignition key!

Secure the machine against rolling away!

Mount all guards correctly after completing any adjustments.

Periodic maintenance:

- Check chain tension
- Carry out a visual inspection for damage.
- Lubricate with chain spray as instructed.

Maintenance at the end of the harvesting season:

- Clean all drive chains and spray them with chain spray in order to prevent corrosion
- Replace worn parts.
- Check chain tension.

Check chain tension:

During the first few operating hours, check the chains frequently for the correct tension.

The sag of a chain should be equal to approx. 2% of the distance between the shafts of driving and driven chain sprockets, measure a on the side opposite the chain tensioner. The chain should not sag at all on the side of the chain tensioner.

Example:

If the shaft spacing between driving and driven chain sprockets is equal to 250mm, then the sag of the chain should be 5mm

Chains which are too loose cause rapid and excessive wear on the roller links and chain sprockets.

Chains which are too taut cause excessive wear on the chain, the bearings and the shafts.

All further information necessary for the care of chain drives can be found on the following pages.

Maintenance

Lubrication

Only carry out adjustments and maintenance work when the engine is switched off!

Remove ignition key!

Secure the machine against rolling away!

Mount all guards correctly after completing any adjustments.

Only use a good quality brand-name grease, e.g. Shell Retinaz A EP2 multipurpose grease.

Remove dirt from lubrication nipples prior to applying grease. Wipe away any excess grease escaping from bearings.

•All wheel bearings and wheel hubs should be greased and packed at least once a year.

•Check wheel lug nuts daily.

•To avoid contamination of product all hydraulic fittings must be checked daily for leaks and replaced or tightened as necessary.

•All bearings are of sealed type and are lubricated by manufacturer. Bearings will only need to be greased at start of season. Over greasing sealed bearings will result in seal being broken and rapid failure of bearing. If seal is broken, bearing should be greased da8ily until replaced. One pump of grease at start of season is sufficient.

Maintenance

Hydraulic system

Only carry out adjustments and maintenance work when the engine is switched off!
Remove ignition key!
Secure the machine against rolling away!

The hydraulic system is under high pressure!
Fluids escaping under high pressure can penetrate the skin and cause serious injuries! If such injuries occur, call a doctor immediately as otherwise there is a risk of serious infection!

Repair work to the hydraulic system may only be carried out by an authorized dealer.

Hydraulic oil and used oil filters are to be stored in suitable containers and disposed of in accordance with the regulations.

Caution! Hot oil can cause serious burns!

Only work on the hydraulic system when the engine is switched off!
Remove ignition key!
Secure the machine against rolling away!

Hydraulic cylinders

Prior to storing the machine (e.g. for winter period), all hydraulic cylinders must be cleaned and completely retracted to protect them against contamination and corrosion. If a complete retraction is not possible, lubricate the cylinders and cover them by means of a blanket. Contaminated and corroded cylinder rods my damage the seals of the hydraulic cylinders when being retracted/extended the first time after the winter storage!

Periodic maintenance:

-Visual inspection for leads.
-Check soiling indicator on filter (only with optional separate hydraulics)

Maintenance at the end of the harvesting season:

-Change filter as instructed

Changing the filter:

-Cleanliness is important when changing a filter.
-Insert the new filter immediately after removing the old one.
-Release filter, unscrew and replace with an original SPUDNIK filter.

Insert the new filter as follows:

-Moisten the sealing face with oil.
-After the filter seal has made contact with the sealing face of the filter housing, tighten the filter approximately one more turn.
-Check the filter for leads after a test run; retighten if necessary.
-Check the hydraulic fluid level and top up if necessary.

Maintenance

Hydraulic system

Periodic maintenance:

-Visual inspection for leads.

-Check level

Maintenance at the end of the harvesting season:

-Change oil as instructed

Changing the oil and checking the level:

Clean the area around the filling nozzle thoroughly before filling the system with new oil.

-Drain the old oil from the tank through the drain plug.

-Collect waste oil and dispose of ii in accordance with the statutory regulations on environmental protection.

-Refit the drain plug after all the oil has been drained.

-Fill up through the filter plug with the required quantity of new oil to the correct specification.

-Check the level.

See the following figure for further information on changing the oil.

Electrical system

Always disconnect the power supply prior to carrying out any work on the electrical system.

Only use original fuses. The use of fuses with a higher rating will cause irreparable damage to the electrics.

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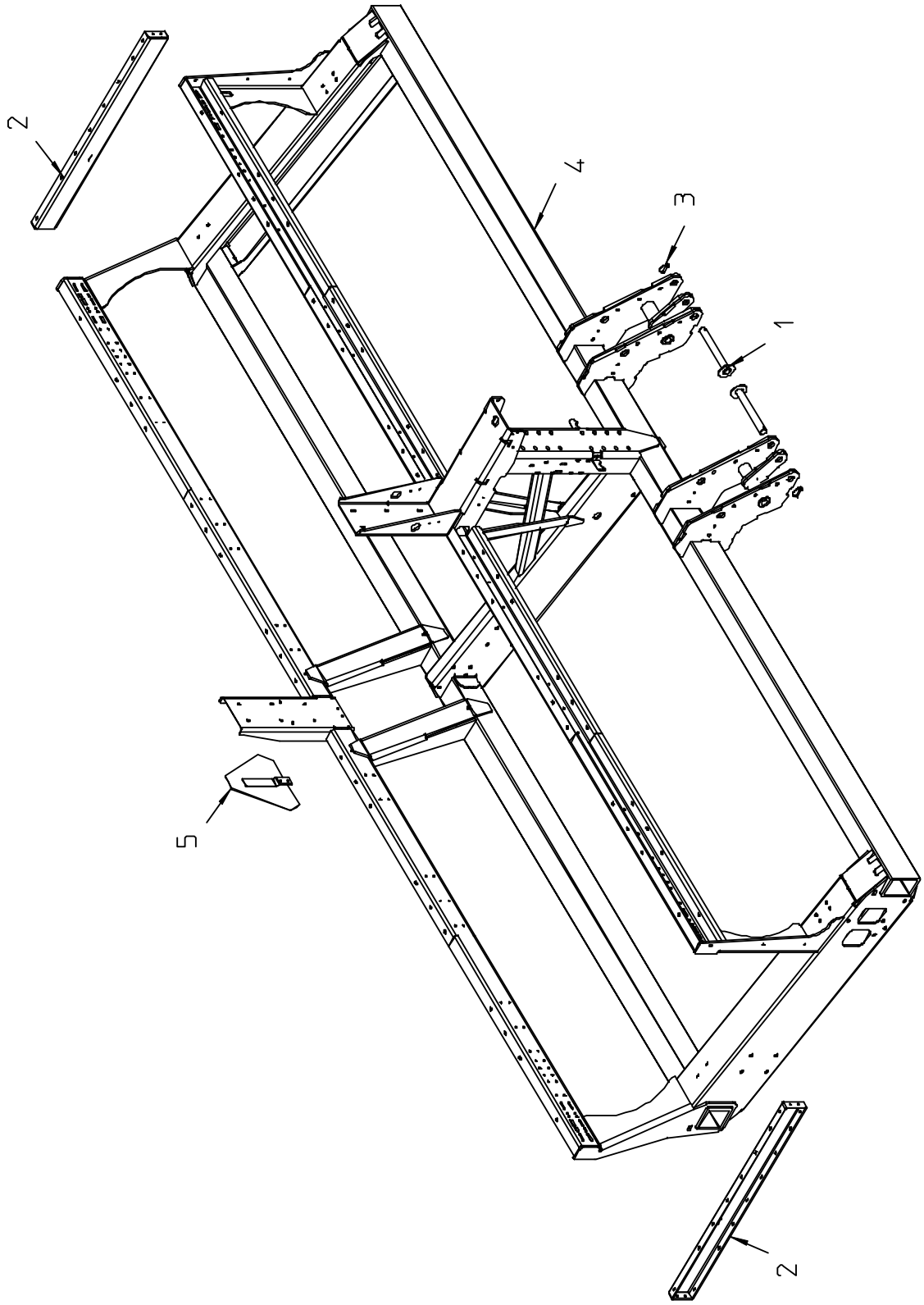
Catwalk	179
Dual Camera	185
Marker Arms	187
Bracket Mount Terminal	189
Small Depth Wheels	191
Tall Depth Wheels	193

Standard Parts

Main Frame Group

E0880XX01K



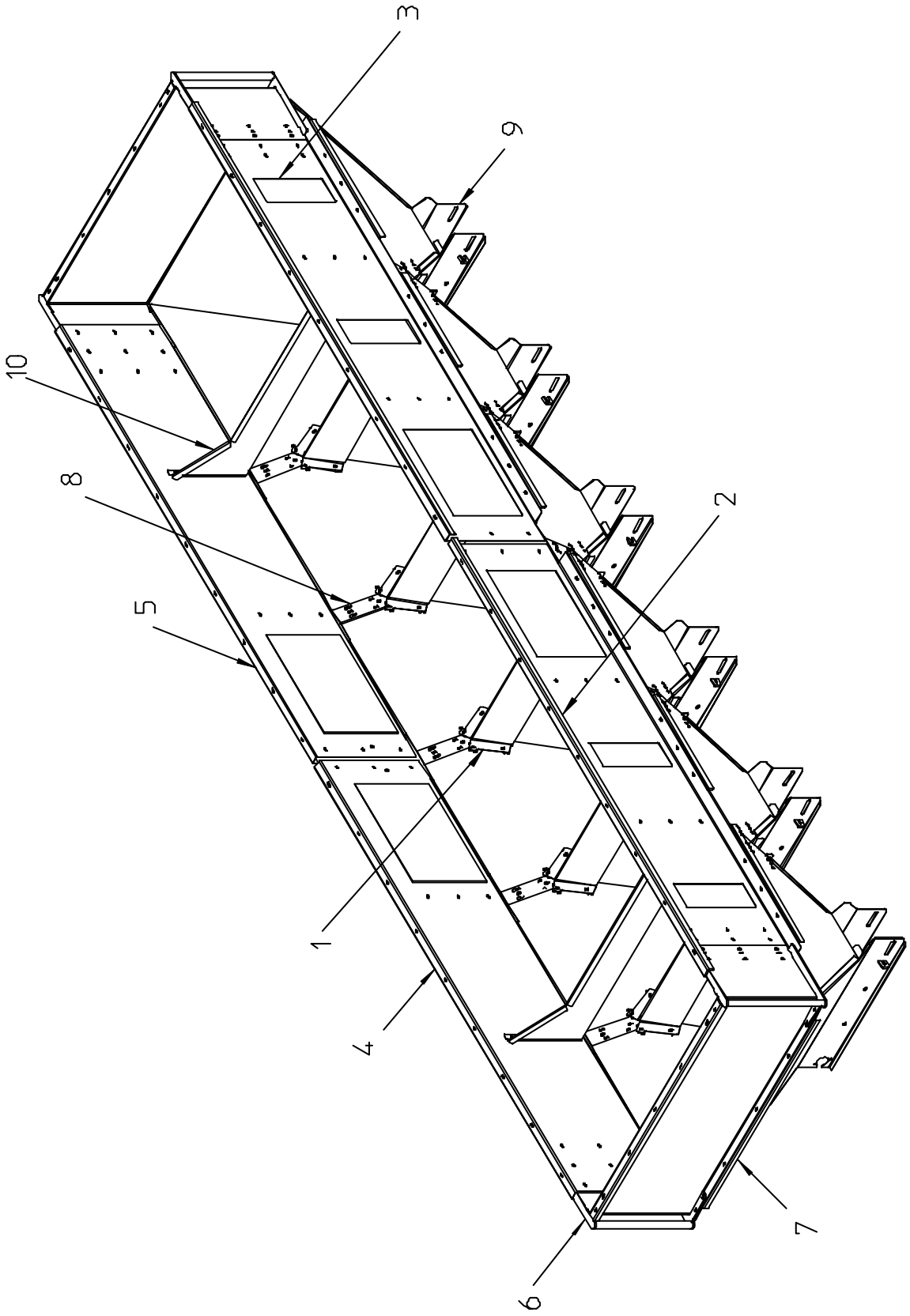
Standard Parts

Main Frame Group

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	2	2	2	131768	WELD,HITCH PIN 1-7/6x12 PLANTER
2	2	2	2	192644	CHANNEL LH OR RH MAIN FRAME 8060
3	2	2	2	571184	PIN,KEEPER,JACK HANDLE 5/16"x2"
4	1	0	0	194853	MAIN FRAME
4	0	1	0	194851	MAIN FRAME
4	0	0	1	194854	MAIN FRAME
5	1	1	1	300106	SIGN,SLOW,MOVING,VEHICLE

Standard Parts

Hopper Group



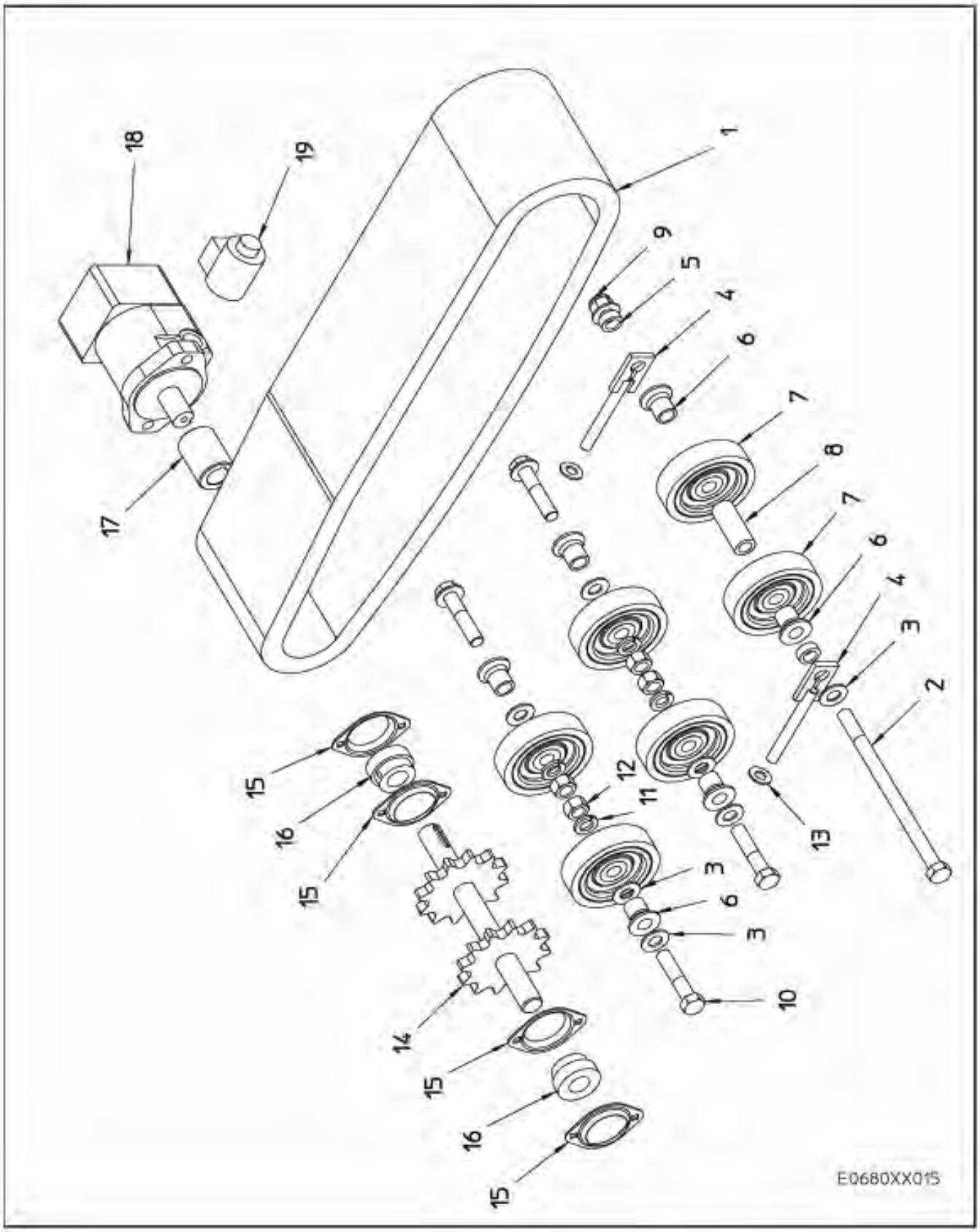
Standard Parts

Hopper Group

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	3	5	7	172903	HOPPER ROOST MID
2	1	0	0	192626	HOPPER PANEL FRONT RH MODEL 8040
2	0	1	0	192019	HOPPER PANEL FRONT RH MODEL 8060
2	0	0	1	192665	HOPPER PANEL FRONT RH MODEL 8080
3	1	0	0	192630	HOPPER PANEL FRONT LH MODEL 8040
3	0	1	0	192111	HOPPER PANEL FRONT LH MODEL 8060
3	0	0	1	192666	HOPPER PANEL FRONT LH MODEL 8080
4	1	0	0	192628	HOPPER PANEL REAR RH MODEL 8040
4	0	1	0	192113	HOPPER PANEL REAR RH MODEL 8060
4	0	0	1	192663	HOPPER PANEL REAR RH MODEL 8080
5	1	0	0	192627	HOPPER PANEL REAR LH MODEL 8040
5	0	1	0	192112	HOPPER PANEL REAR LH MODEL 8060
5	0	0	1	192664	HOPPER PANEL REAR LH MODEL 8080
6	2	2	2	192009	HOPPER PANEL FRONT RH MODEL 8040
7	1	1	1	193865	HOPPER CONV END RH MODEL 80XX
8	4	4	4	193867	HOPPER CONV MIDDLE MODEL 80XX
9	1	1	1	193866	HOPPER CONV END LH MODEL 80XX
10	2	2	2	172902	HOPPER SUPPORT SHEET

Standard Parts

Feed Chains



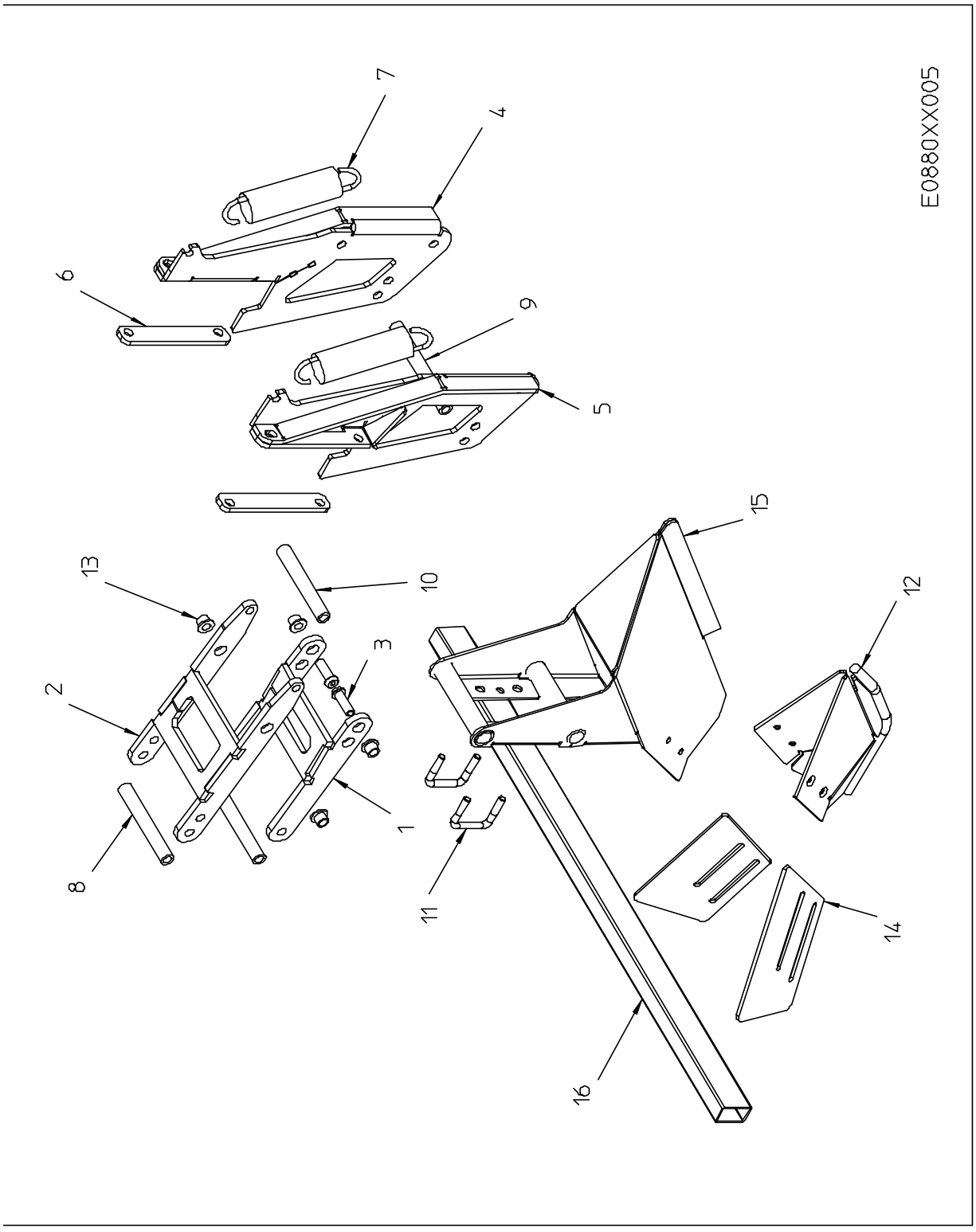
Standard Parts

Feed Chains

Pos.	Quantity	Part #	Despription
1	1	352390	CHN,HOOK,7"x1"PITCHx72 PITCHES W/FLITES
2	1	502305	BOLT,HEX,HD,5/8"-11UNC x 10" GR 5
3	10	501371	WASHER,FLAT,5/8" (SAE)
4	2	131807	WELD,IDLER ADJUSTER (SMALL)
5	2	M00651	SPACER,TAKE-UP,SEED FEED CONVEYOR
6	6	351309	STANDOFF,RLR,BLTD,CHN,5/8"x1-1/4" #750
7	6	351314	RLR,BLTD,CHN,5/8"x4" RUBBER
8	1	171994	TUBE,SPACER SEED FEED CONVEYOR
9	1	501814	NUT,HEX,5/8"-11UNC
10	4	501129	BOLT,HEX,HD,5/8"-11UNC x 3" GR 5
11	4	501935	WASHER,LOCK,SPLIT,5/8"
12	4	501814	NUT,HEX,5/8"-11UNC
13	2	501269	WASHER,FLAT,1/2" (SAE) ZINC PLATED
14	1	192600	SHAFT CHAIN DRIVE HOPPER MDL 8060
15	2	231157	HOUSING,BRNG,2HOLE,52MM,FLANGETTE PLATED
16	2	231070	BRNG,INSERT,1" BORE SPHR OD
17	1	050015	SHAFT COUPLING
18	1	602108	MTR,HY,12.5CUIN,1"KEY,SAE-A,RS-SERIES
19	1	602120	VALVE,CARTRIDGE,2-WAY POPPET

Standard Parts

Stone Furrow Openers



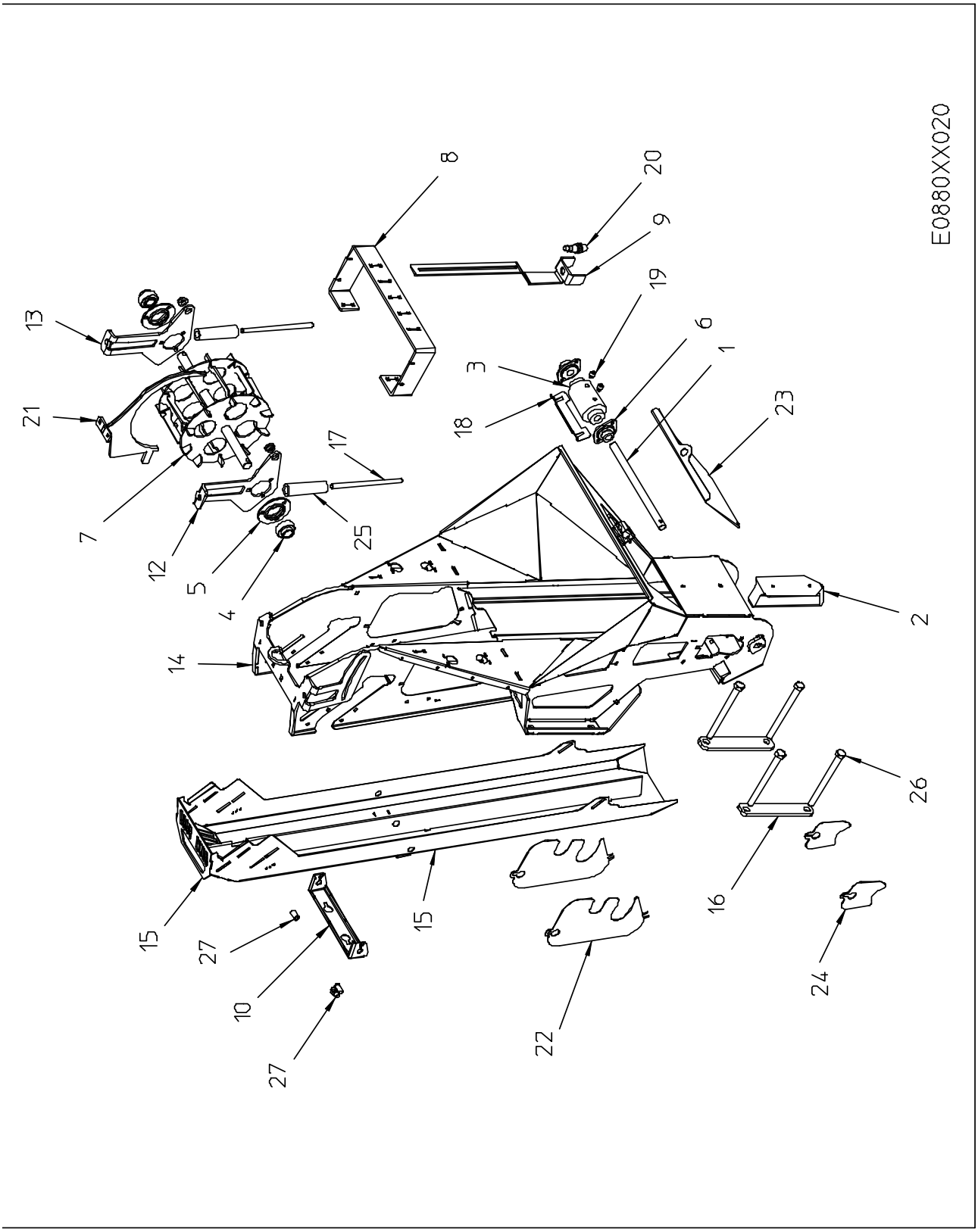
Standard Parts

Stone Furrow Openers

Pos.	Quantity	Part #	Despription
1	1	194811	ARM BOTTOM,SHOE MOUNT,PLANTER-2008
2	1	194812	ARM,TOP,SHOE,MNT PLANTER-2008
3	2	502674	BOLT,BUTTON,HD,5/8"-11UNC x 2" GR 5
4	1	194813	FRAME,LH,SHOE,MNT,PLANTER-2008
5	1	194814	FRAME,RH,SHOE,MNT,PLANTER-2008
6	2	174067	PLATE,2
7	2	097.00105	STRAP FURROW OPENER MODEL 80XX
8	2	090083	TUBE
9	1	173219	TUBE
10	1	173218	TUBE
11	2	502694	U-BOLT,1-2"x13UNCx2.5"Wx2.5"L
12	1	194595	WEARPLATE HEAVY SHOE
12	1	132997	WEARPLATE,CHOMED
13	4	231268	BRNG,JOURAL,FLNG,BRONZE.627ID.879OD.75L
14	2	173462	SHOE,EXTENSION,80XX,2006
14	2	133000	SHOE EXTENSION,CHOMED
15	1	194815	SHOE,PLANTER,08
15	1	132998	SHOE,CHOMED
16	1	173217	TUBE

Options

Spudnik Row Unit



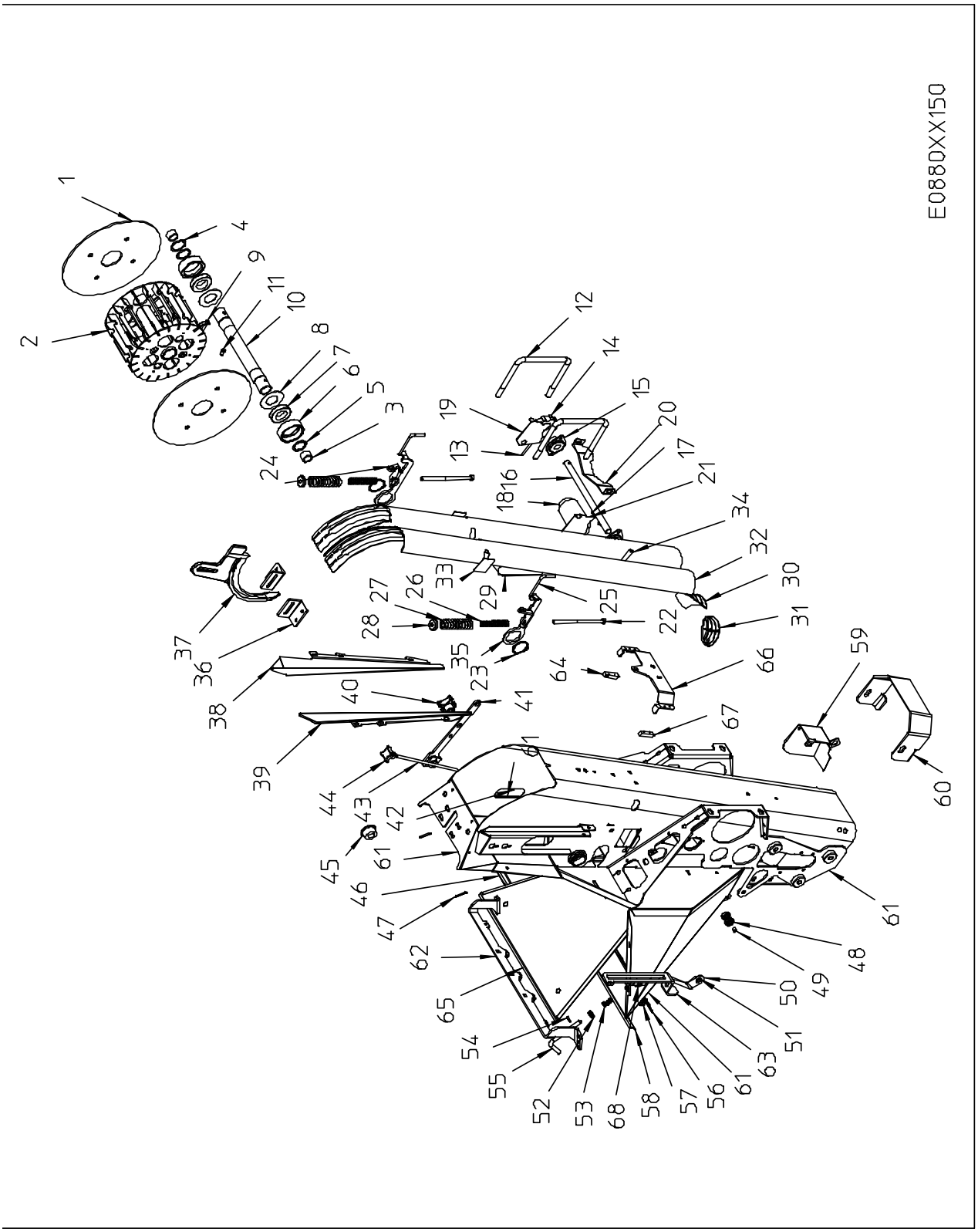
Options

Spudnik Row Unit

Pos.	Quantity	Part #	Description
1	1	037.03114	AXLE SHAFT [19,98x320]
2	1	088.00527	SECTION RIDGE
3	1	088.00830	PULLEY [68]
4	2	B96.00069	UC 205, 25-52-34, BALL BEARING
5	2	B96.00132	STEEL BEARING HOUSING PF 205
6	2	B96.00246	TWO HOLE FLANGE BEARING RAT20 [x]
7	1	194422	DRUM, DRIVE ROW UNIT
8	1	174013	BRACKET, BIN SENSOR ROW UNIT
9	1	174008	BRACKET, BIN SENSOR ROW UNIT
10	1	194865	SHEET, ROW UNIT SPUDNIK, BRACKET
11	2	050423	BUSHING ROW UNIT
12	1	174014	PLATE, ROW UIT 07 BEARING TOP LH
13	1	174015	PLATE, ROW UIT 07 BEARING TOP RH
14	1	194418	ROW UNIT 07, FRAME
15	1	194419	TUNNEL, ROW UNIT 07
16	2	174067	PLATE,2
17	2	040102	ROD, THREADED 1/2"
18	1	174009	SHEET, ROW UNIT 07 SCRAPER
19	2	B99.01924	SET SCREW M12X20 DIN915 [12X20]
20	1	B94.04671	SENSOR VISUAL
21	1	194429	SEPARATOR, ROW UNIT SPUDNIK
22	2	174257	SHEET, COVERAGE ROW_UNIT
23	1	174256	SHEET, COVER, ROW UNIT
24	2	174258	SHEET, COVERAGE ROW_UNIT
25	2	981381	SPRING, COMPRESSION, 4-3/4" L BBED MOUNT
26	4	502307	BOLT, HEX, HD, 5/8"-11 UNC x 7-1/2 *GR8*
27	1	B94.04200	SENSOR SKIP DETECT, SPUDNIK

Standard Parts

Row Unit Group



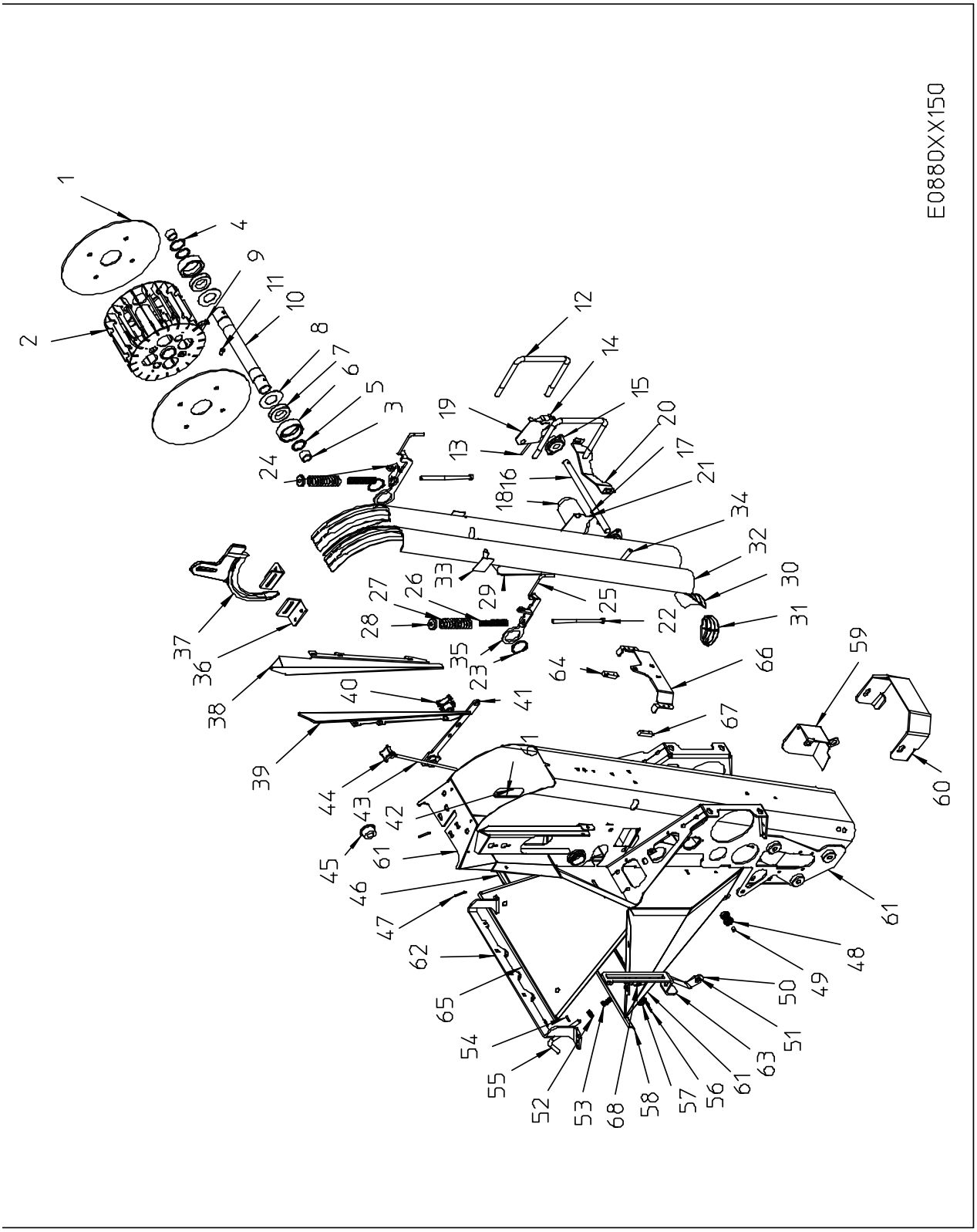
Standard Parts

Row Unit Group

Pos.	Quantity	Part #	Despription
1	2	088.00514	LIMITING DISC [5x340]
2	1	100.43497	PULLEY [x]
3	2	B96.00247	SLIDE BEARING BUSH MSM-2532-20 [x]
4	1	B99.02688	SHIM,40X50X1
5	2	B99.02613	SNAPR.,40X1.75, EXT., DIN471
6	2	057.03749	BEARING RING [80x8x26]
7	2	B96.00088	DEEP GROOVE BA BEARING 6008-2 [40-68-15]
8	2	088.00724	PULLEY [1x78x41]
9	1	B99.02434	LINCH PIN GAL 8X45 [8x45]
10	1	060.02961	AXLE TUBE [40x6x360]
11	2	B99.01941	GRUB SCREW M12X20 DIN915-3,5 [12x20]
12	2	037.03067	U-BOLT M16 GAL [16x518]
13	1	B99.02340	SPRING SLOTTED PIN DIN1481-6X6 [6x60]
14	1	088.01125	EXCENTRIC DISC
15	2	B96.00246	TWO HOLE FLANGE BEARING RAT20 [x]
16	1	037.03114	AXLE SHAFT [19,98x320]
17	2	B99.01924	SET SCREW M12X20 DIN915 [12x20]
18	1	088.00830	PULLEY [68]
19	1	015.37882	COVER PLATE LH
20	1	018.00927	SCRAPER
21	1	015.37883	COVER PLATE RH
22	2	099.00162	HHC-SCREW M10X190 [10x190]
23	2	B99.02617	RETAINING RING A 50X2 DIN471 [50x2]
24	1	015.31088	BRACKET RH GL34 01 500-1(42)
25	2	037.03995	BOLT [8x120]
26	2	097.00129	PRESSURE SPRING [4-20-102]
27	2	097.00128	PRESSURE SPRING [6-33-110]
28	2	019.00840	COVER [1,5x48]

Standard Parts

Row Unit Group



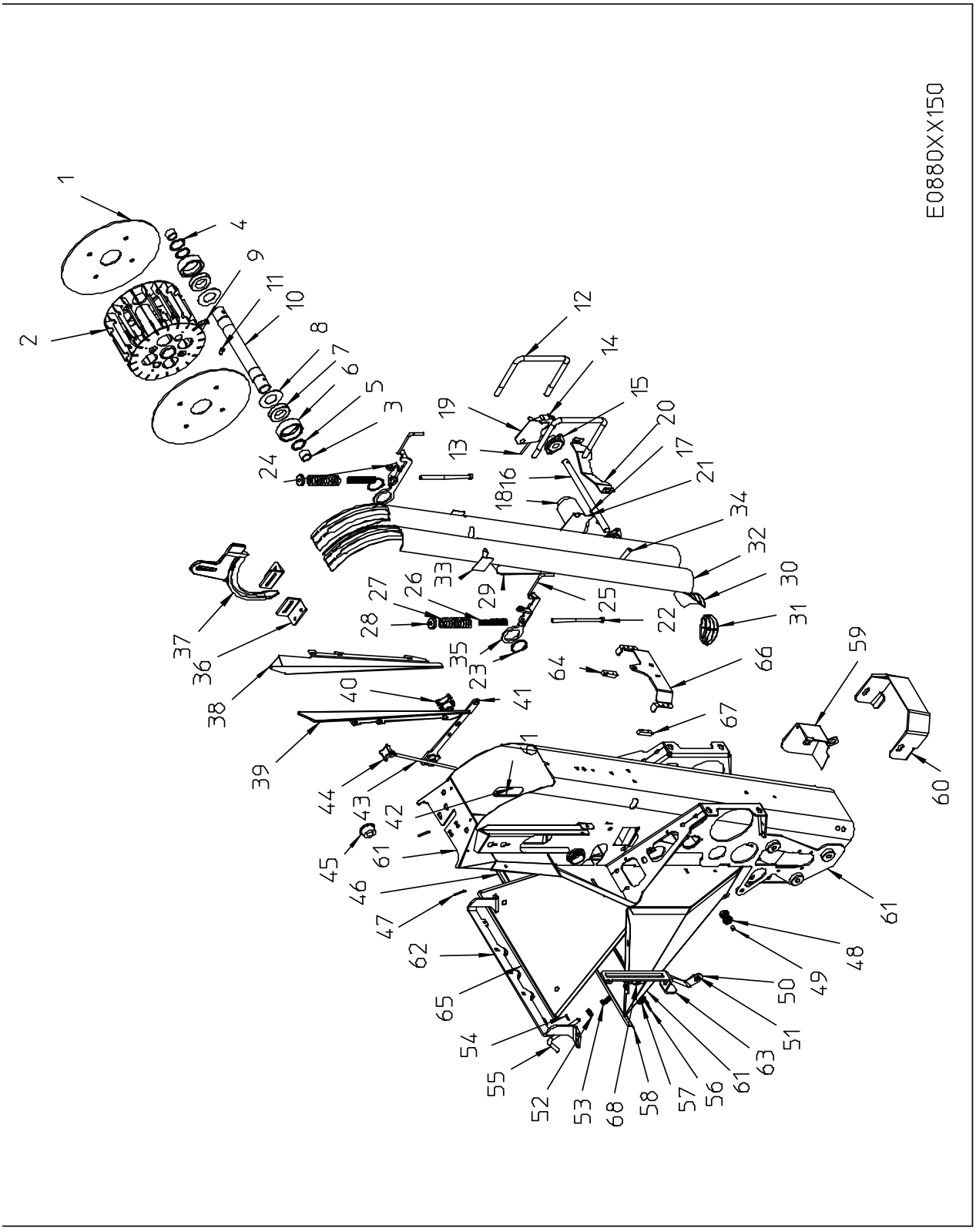
Standard Parts

Row Unit Group

Pos.	Quantity	Part #	Despription
29	1	088.00527	SECTION RIDGE [8800527]
30	1	088.00529	GUIDE BAR R/H [70x100]
31	1	088.00528	GUIDE BAR L/H [70x100]
32	1	100.43501	INSERT PLATE [x]
33	2	089.01155	DECAL
34	1	B99.01937	SET SCREW M12X60 DIN916-GAL [12x60]
35	1	015.31230	BRACKET LH GL34 01 500-1(43)
36	2	015.21667	BRACKET TOP OF GL ELEMENT
37	1	088.00558	DISCONNECT WEDGE [x]
38	1	019.01068	CLOSING PLATE L/H [1,5x109x676]
39	1	019.01069	CLOSING PLATE R/H [1,5x109x676]
40	1	B89.02393	SQUARE HEADED HANDLE 9335 B63 [x]
41	1	015.23243	ADJUSTING LEVER [6x43x360]
42	1	015.54503	PLATE_GAGE
43	1	099.00406	THREADED ROD
44	1	B89.02434	SQUARE-HEADED HANDLE M10 6335B [x]
45	2	088.00532	BEARING BUSH [50-23]
46	1	061.02426	TUBE
47	2	B99.02404	COTTER PIN 3,2X32 DIN 94-GAL [3,2x32]
48	2	B96.00080	DEEP GROOVE BA BEARING 6001-2 [12-28-8]
49	1	060.02477	SPACER TUBE [12x1,5x10]
50	1	015.37327	OSCILLATOR LEVER [4x205x561]
51	2	060.02615	SPACER,18X2.5X6
52	2	B94.02590	SPACER
53	1	097.00066	PRESSURE SPRING
54	1	B99.02304	SPRING SLOTTED PIN DIN1481-4X2
55	1	037.04486	PIN F MEC SHAKER
56	2	B87.01001	SAFETY CHAIN -PLASTIC [x]

Standard Parts

Row Unit Group



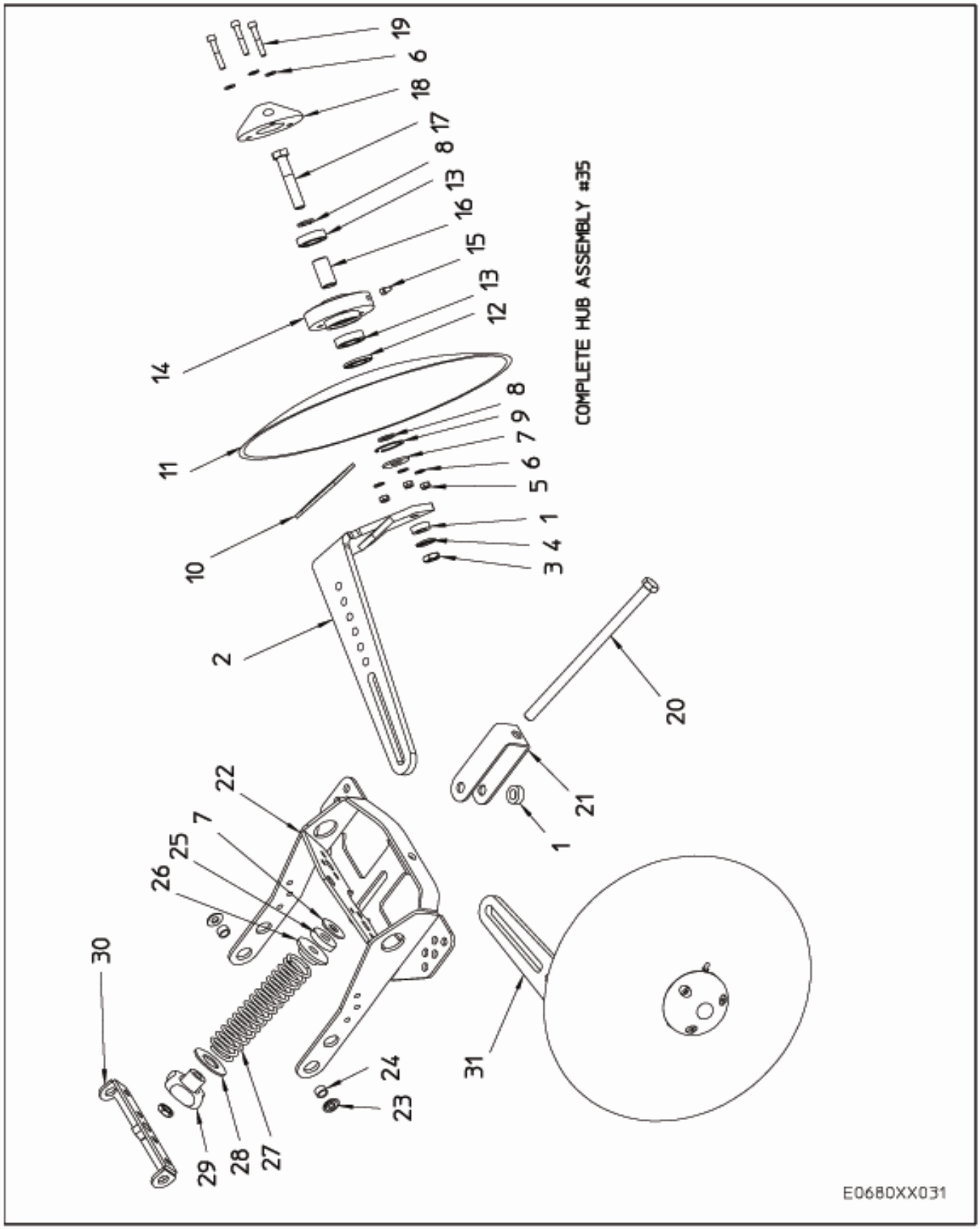
Standard Parts

Row Unit Group

Pos.	Quantity	Part #	Despription
57	2	B94.01452	RUBBER BUSHING
58	1	015.28205	LEDGE [2x34x600]
59	1	193124	SHIELD,BIN SHAKER SPROCKET,80XX,06
60	1	173514	PLANTING UNIT ROCK COVER 8011,2006
61	1	100.77123	DROP TUBE
62	1	173505	BRACKET,ROW UNIT BIN SENSOR 8060
63	1	173225	BRACKET BIN SENSOR ROW UNIT 8060
64	1	B94.01853	SENDER,PHOTOELECTRIC BEAM
65	1	100.72191	BIN PLATE
66	1	173562	SENSOR_BRACKET,SKIP DETECT,80XX,2006
67	1	B94.01854	RECEIVER PHOTOELECTRIC BEAM
68	1	B94.04671	SENSOR,VISUAL

Option

Grimme Hilling Coulter



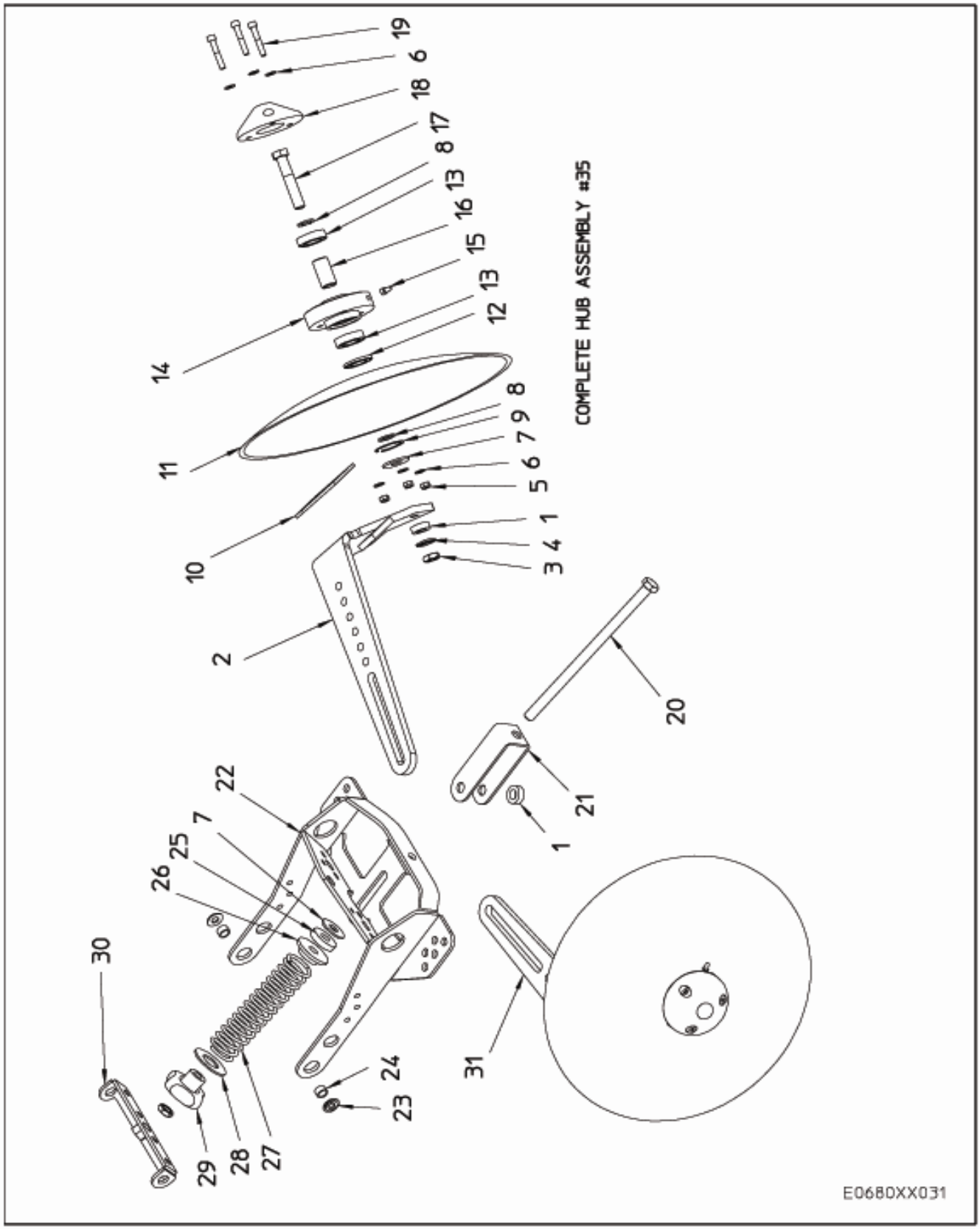
Option

Grimme Hilling Coulter

Pos.	Quantity	Part #	Despription
		200.71648	COVERING DISC ASSEMBLY
1	3	089.00577	SPACER, 30x10
2	1	100.71645	FIXING DEVICE RH
3	3	B99.01840	HEXAGON NUT M16 DIN936-17H-GAL [m16]
4	2	B99.03114	M16 CONTACT WASHER(OLD #B99.02
5	6	B99.01816	M8 HEX LOCK NUT, DIN985,(OLD#B
6	12	B99.03095	DISC B8,4 DIN125-GAL [8.4]
7	3	B99.03047	PLAIN WASHER 17X44X3 GAL [17]
8	4	B99.03061	DISC 17 DIN433-GAL [17]
9	2	B99.02642	RETAINING RING J 47X1,75 DIN47 [47x1,75]
10	1	018.00974	SCRAPER [1,5x100x150]
11	2	089.01138	COVERING DISC [3,5x460]
12	2	B96.00231	NILOS RING 25X47 LSTO [25x47]
13	4	B96.00262	GOOVED BALL BEARING 6005-RS [25-47-12]
14	2	088.00552	DISC HUB [x]
15	2	B89.02125	GREASE NIPPLE H1-M10X1,5 71412 [x]
16	2	037.03354	BUSH [25x47,5]
17	2	B99.01427	HHC-SCREW M16X90 DIN931-8.8-GA [16x90]
18	2	088.00551	HUB COVER [110-40]
19	6	B99.01728	SHC-SCREW DIN912 M8X50-8.8-GAL [8x50]
20	1	B99.04372	M16X300 HHC BOLT931-8.8-GALV
21	1	015.39878	FORK AT COVERING DISC
22	1	100.48364	BRACKET [x]
23	2	B99.03112	M12 CONTACT WASHER (OLD #B99.0
24	2	060.01300	SPACER TUBE [18x2,5x10]
25	1	076.02391	RUBBER BUFFER,PUMP GEARBOX,GZ
26	1	088.00581	PLATE [x]
27	1	097.00151	PRESSURE SPRING GAL [5-50-200]

Option

Grimme Hilling Coulter

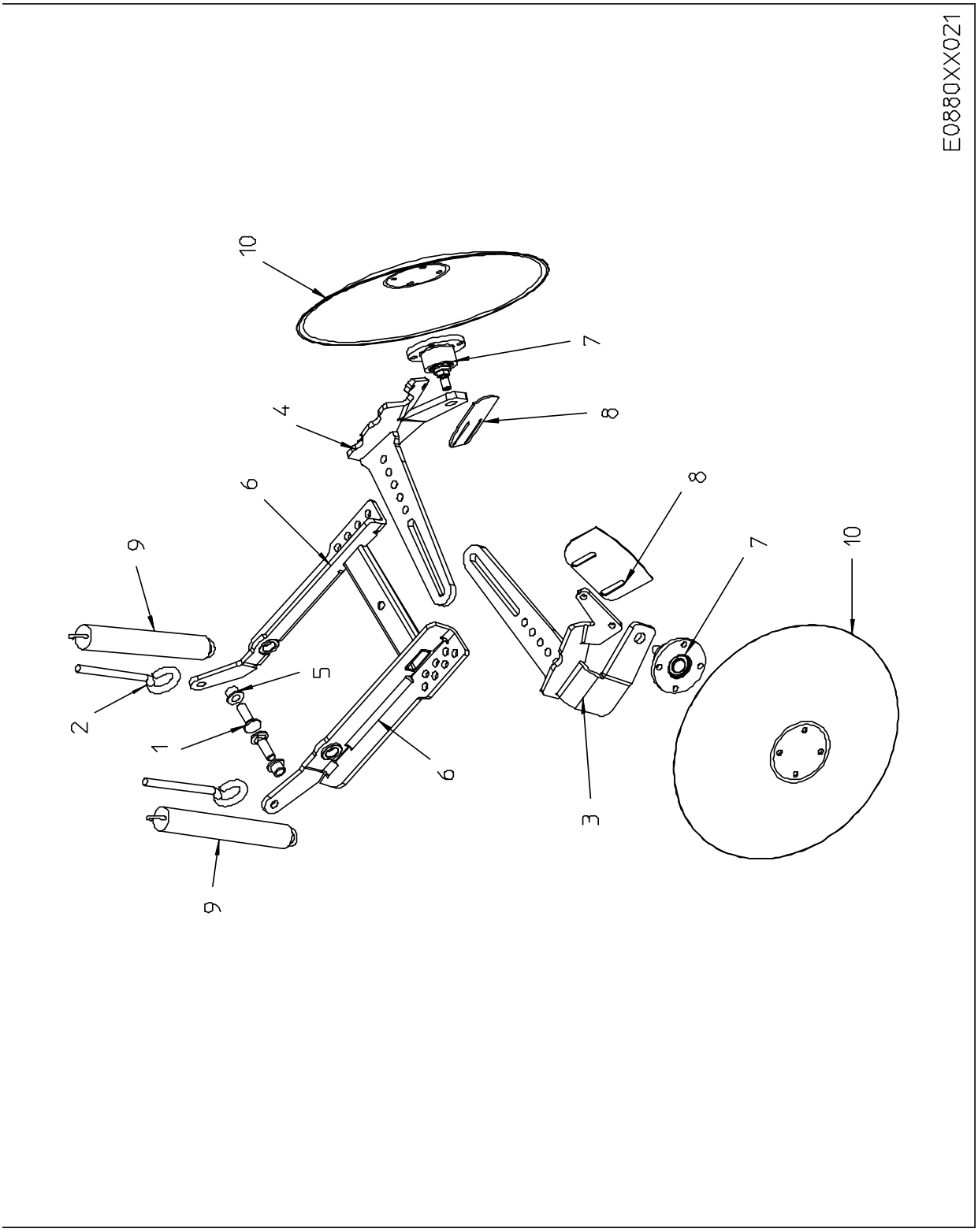


Option
Grimme Hilling Coulter

Pos.	Quantity	Part #	Despription
28	1	B99.03025	PLAIN WASHER 31X61,5X3 GAL [31]
29	1	B89.02198	STAR GRIP M16 NR.1731E [x]
30	1	100.52350	BRACKET [x]
31	1	100.71644	FIXING DEVICE LH
35	2	200.48403	DISC HUB [x]

Option

Spudnik Hilling Colter



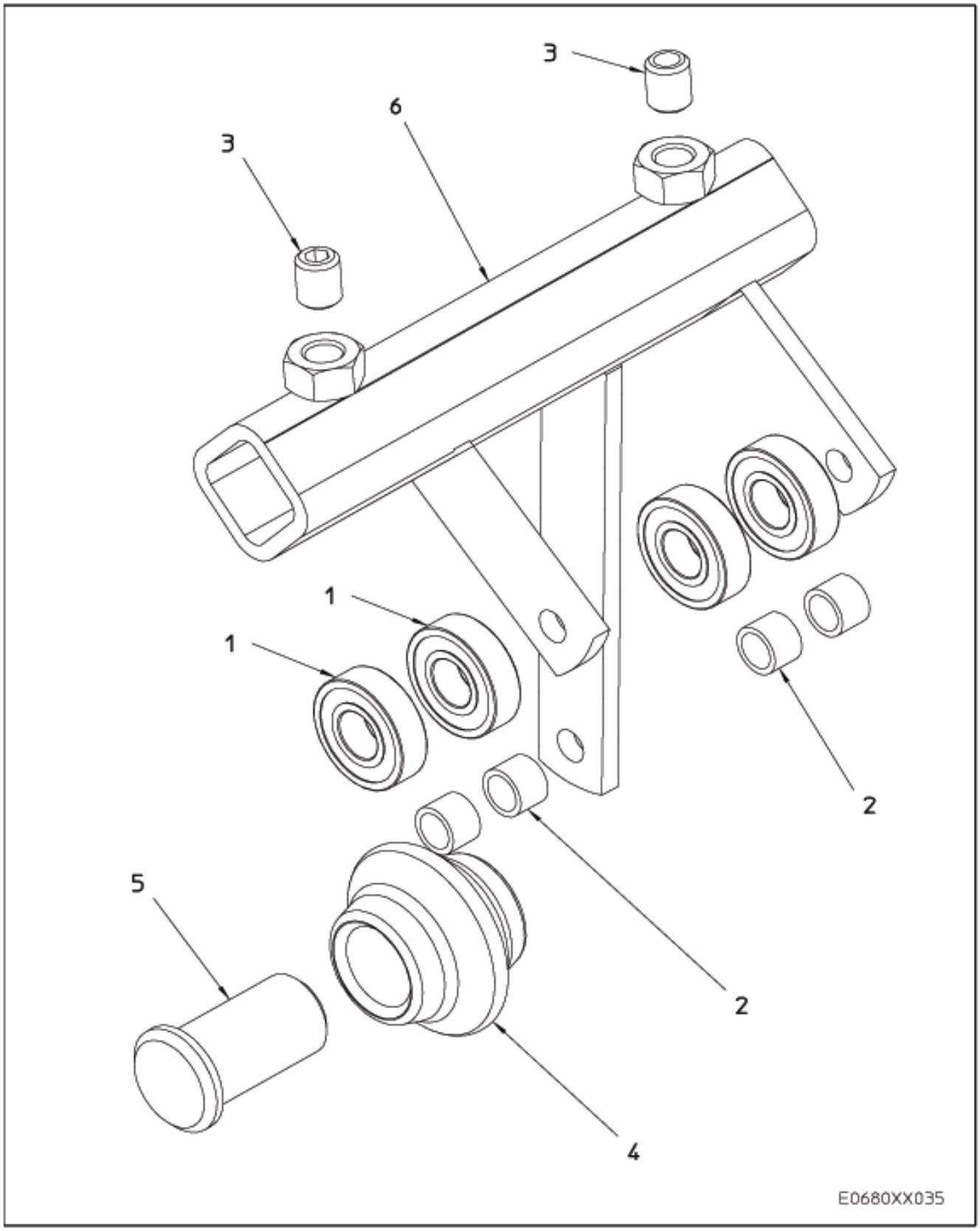
Option

Spudnik Hilling Colter

Pos.	Quantity	Part #	Description
1	2	501359	BOLT,CARRIAGE,5/8"-11UNC x 2" GR 2
2	2	502410	BOLT,EYE,1/2" x 8" W/NUT *PLATED*
3	1	194434	BRACKET,LH ROW UNIT 07 80XX
4	1	194435	BRACKET,RH ROW UNIT 07 80XX
5	2	231268	BRNG,JOURAL,FLNG,BRONZE.627ID.879OD.75L
6	1	194432	COULTERS,FRAME ROW UNIT 07
7	2	B89.03662	HUB
8	2	173716	SCRAPER,COV DISCS 80XX
9	2	981449	SPRING,PLANTER,1.75"ODx13"LNx.225"WIRE
10	2	089.01699	COULTER

Options

Grimme Mechanical Shaker



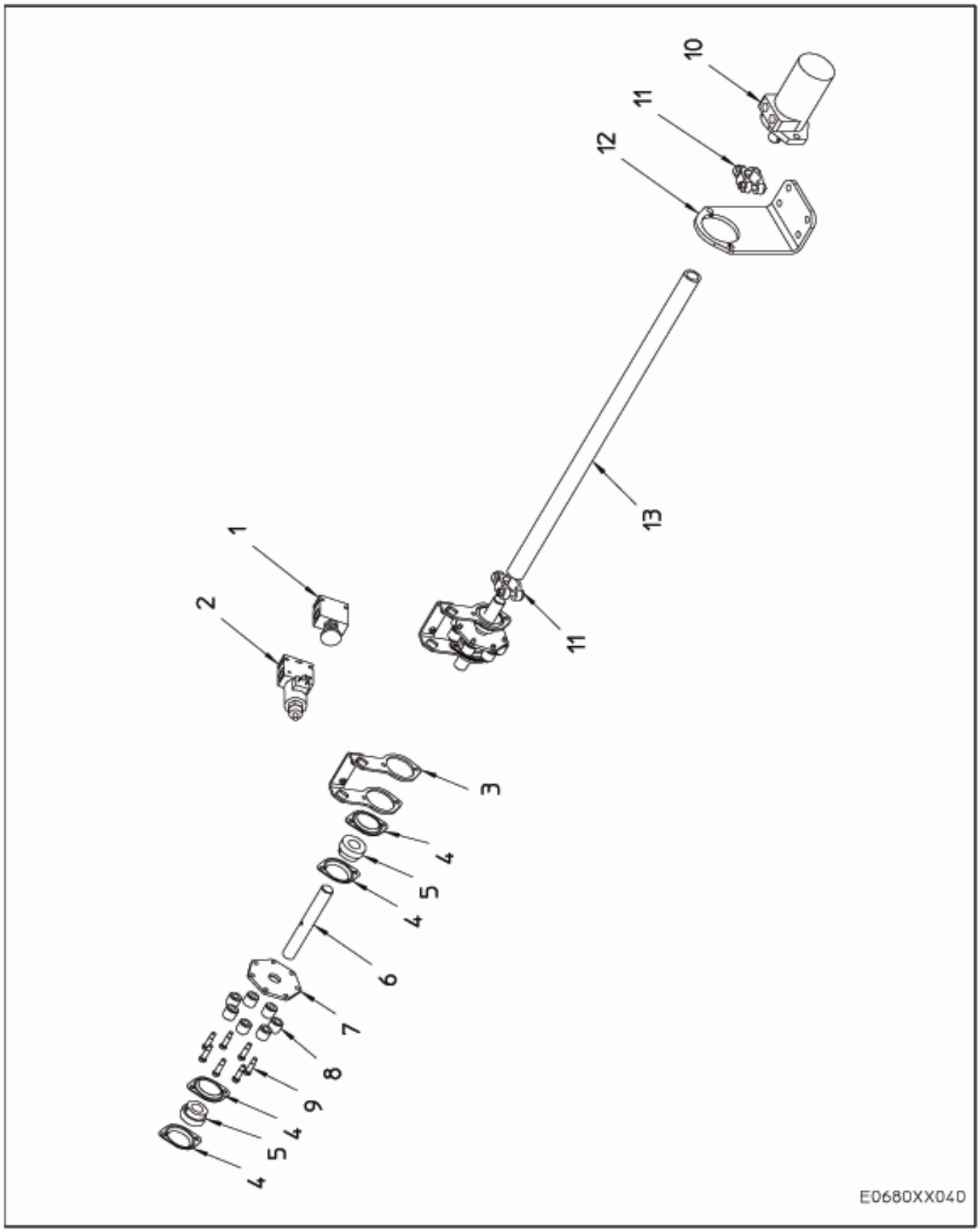
Options

Grimme Mechanical Shaker

Pos.	Quantity	Part #	Despription
1	4	B96.00080	DEEP GROOVE BA BEARING 6001-2 [12-28-8]
2	4	060.01750	SPACER TUBE [12x1,5x8,5]
3	2	B99.01912	SET SCREW M10X12 DIN916 [10x12]
4	1	088.00531	ROLLER [48]
5	1	031.02610	AXLE [26x41]
6	1	100.55931	BRACKET [x]

Options

Grimme Hydraulic Shaker



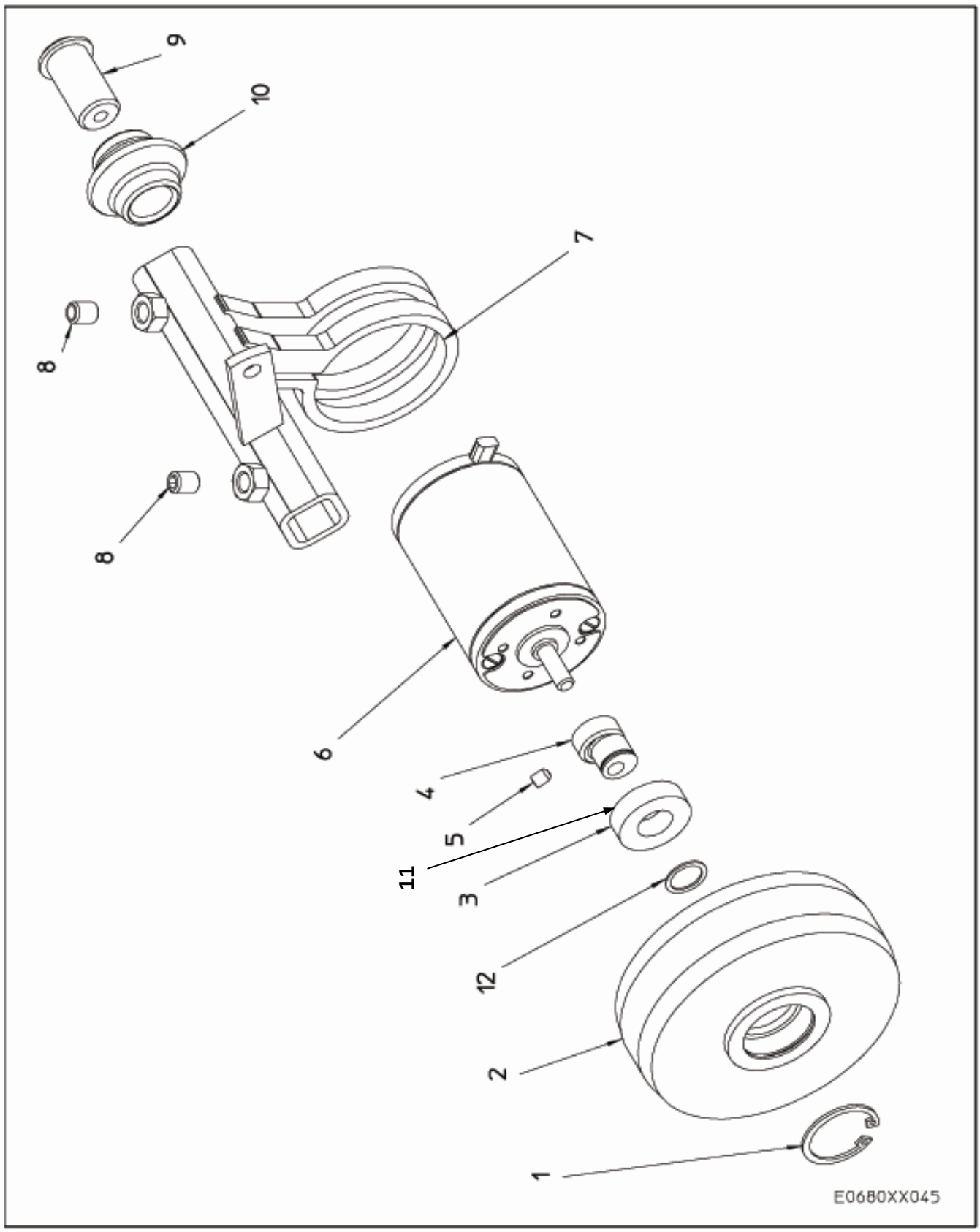
Options

Grimme Hydraulic Shaker

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	1	1	1	602332	FLOW CONTROL VALVE MANUAL 5GPM 3-WAY
2	1	1	1	602331	FLOW CONTROL VALVE ELECTRIC 5GPM 3-WAY
3	4	6	8	193679	HYD SHAKER MOUNT 80XX
4	8	12	16	231157	HOUSING,BRNG,2HOLE,52MM,FLANGETTE PLATED
5	8	12	16	231070	BRNG,INSERT,1" BORE SPHR OD
6	4	6	8	050177	SHAKER,SHAFT,80XX,2006
7	4	6	8	193029	SHAKER,SPROCKET,80XX,2006
8	28	42	56	981759	ROLLER,DELRIN,HYDRAULIC SHAKER
9	28	42	56	502668	BOLT,SHOULDER,SOCKET HEAD,3/8 X 1
10	1	1	1	601655	MTR,HY,3.0CUIN,1"KEY,SAE-A,TB-SERIES
11	8	12	16	502654	CLAMP,DOUBLE BOLT,1-1/4"ID
12	1	1	1	173463	MOUNT,MOTO,HYD,SHKR,80XX,2006
13	4	6	1	132842	SHAKER CONNECTOR 36 SPACING ASMB
13a	4	6	1	173775	TUBE,HYD,JIC,1.00x.083x20INCH
13b	4	6	8	602730	HOSE,SNGBRD,1" OD

Options

Grimme Electrical Shaker



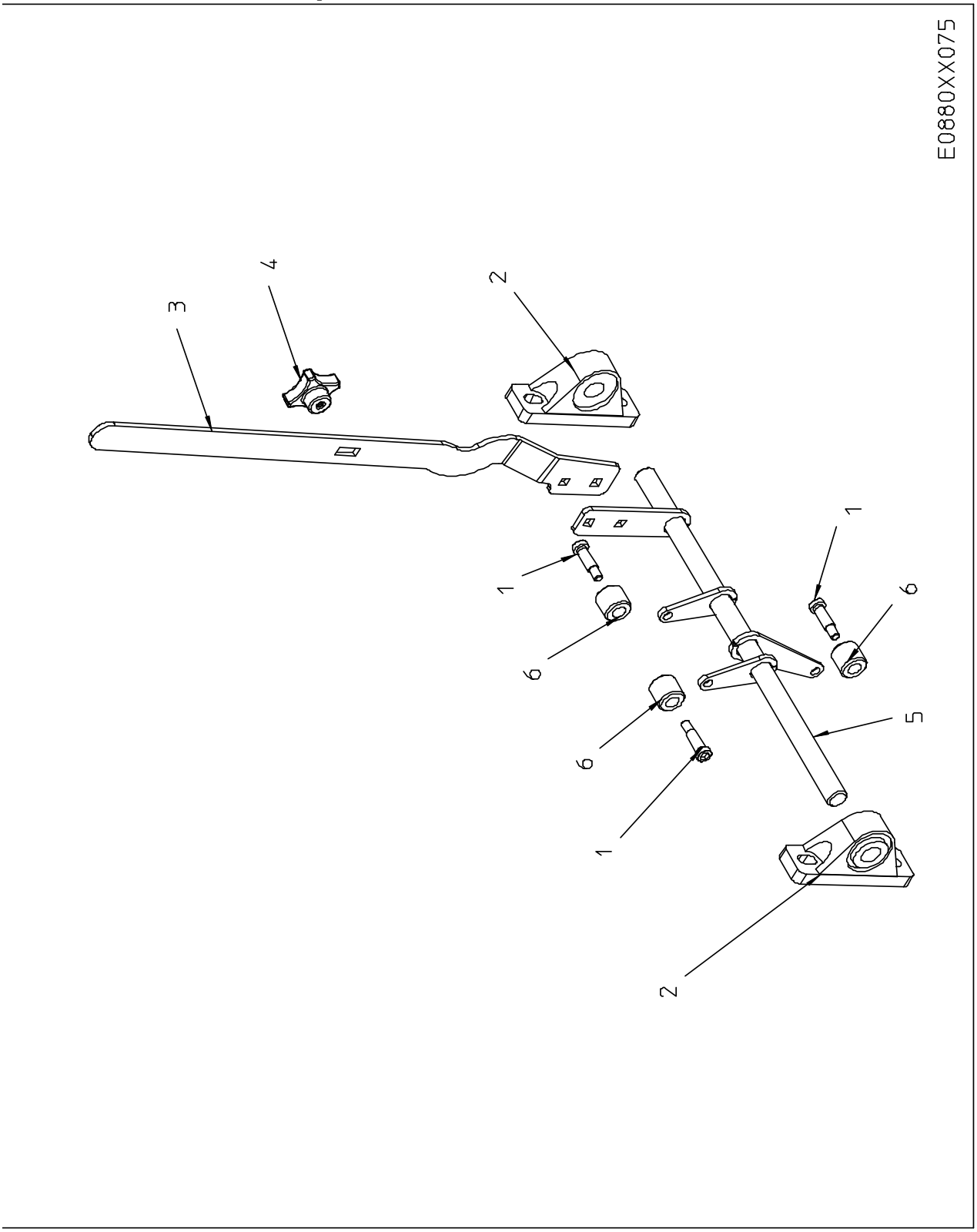
Options

Grimme Electrical Shaker

Pos.	Quantity	Part #	Despription
1	1	B99.02638	SNAPRING, INT.,35X1.5
2	1	088.00530	SHAKE DISC [120,8-43]
3	1	B96.00014	6003 2RS 17-35-10 BEARING
4	1	037.03154	ECCENTRIC [22x23,2]
5	1	B99.01936	GRUB SCREW M6X8 DIN916 [6x8]
6	1	B94.02864	E-MOT,M63x25,12V,2100 U/MIN
7	1	100.43633	MOTOR BRACKET [x]
8	2	B99.01912	SET SCREW M10X12 DIN916 [10x12]
9	1	031.02610	AXLE [26x41]
10	1	088.00531	ROLLER [48]
11	1	B99.03150	CU-DICHTRING A 8X12X2 DIN7603
12	1	B99.02602	SNAPR.,15X1, EXT., DIN471

Option

Spudnik Mechanical Shaker

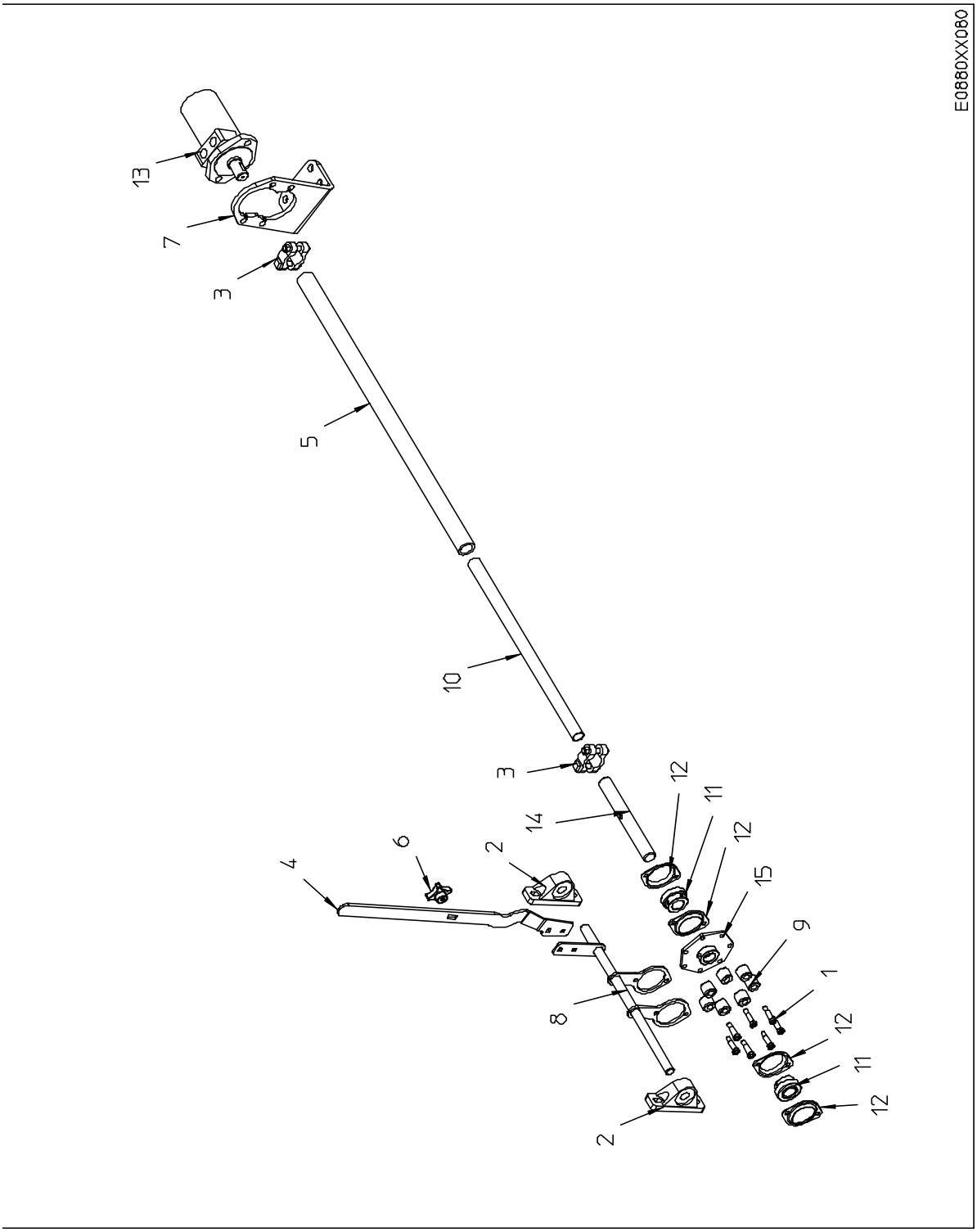


Options

Shaker Mechanical Spudnik

Pos.	Quantity	Part #	Description
1	3	502668	BOLT,SHOULDER,SOCKET HEAD,3/8"x1"
2	2	231274	BRNG,PB,3/4"BORE,SET SCRW CLR,LGT DUTY
3	1	174012	PLATE,ARM SHAKER
4	1	981500	KNOB,PLASTIC, W/THREAD INSERT 5/16"-18x2
5	1	193750	SHAKER MOUNT MEC 80XX
6	3	981759	ROLLER,DELRIN HYDRAULIC SHAKER

Options
Shaker Hydraulic
Spudnik



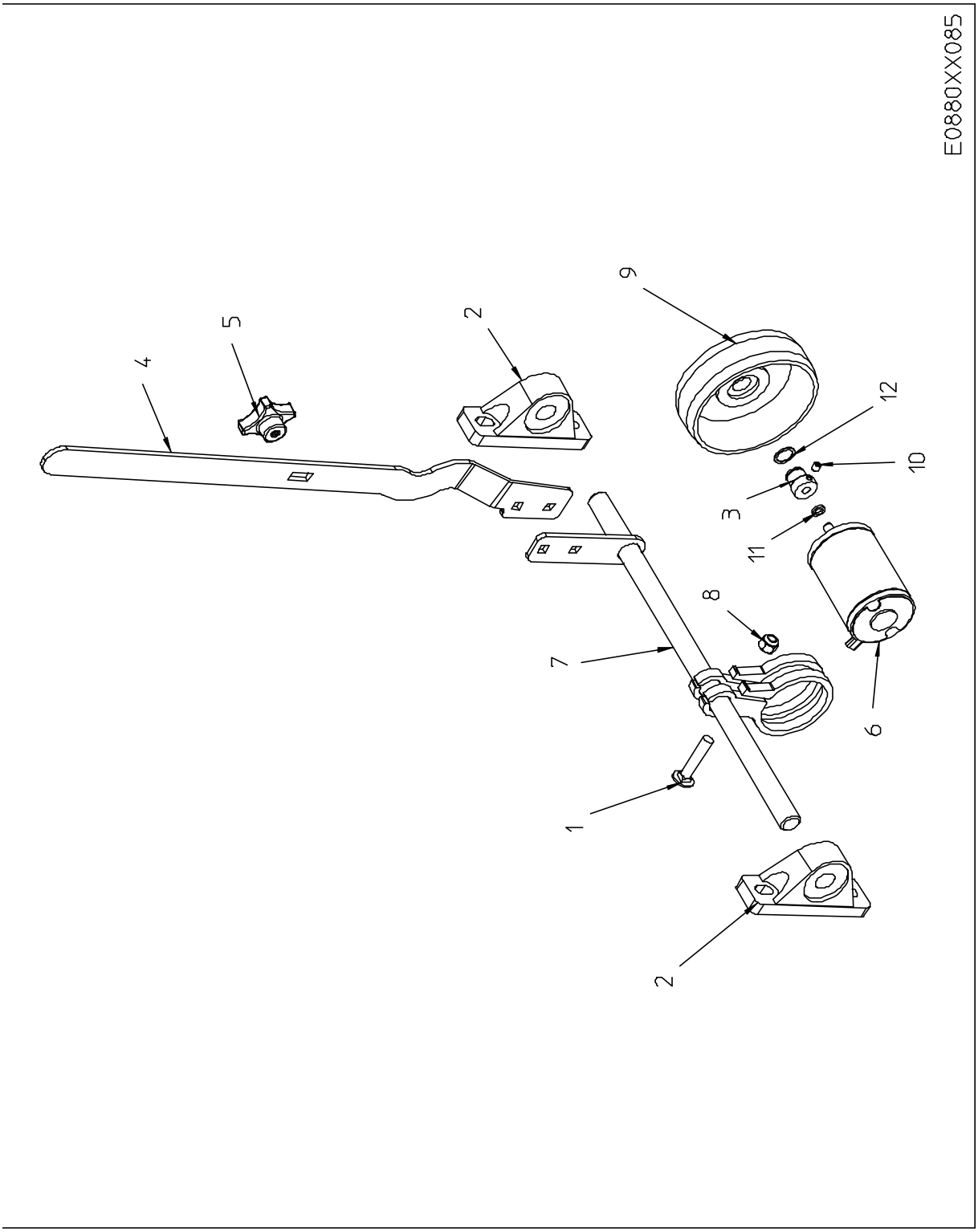
Options

Shaker Hydraulic Spudnik

Pos.	Quantity	Part #	Description
1	7	502668	BOLT,SHOULDER,SOCKET HEAD,3/8"x1"
2	2	231274	BRNG,PB,3/4"BORE,SET SCRW CLR,LGT DUTY
3	2	502654	CLAMP,DOUBLE BOLT,1-34/64"ID
4	1	174012	PLATE,ARM SHAKER
5	1	602730	HOSE,SNGBRD,1" OD x 31"
6	1	981500	KNOB,PLASTIC, W/THREAD INSERT 5/16"-18x2
7	1	173463	MOUNT,MOTO,HYD,SHKR,80XX,2006
8	1	193751	SHAKER MOUNT HYD 80XX
9	7	981759	ROLLER,DELRIN HYDRAULIC SHAKER
10	1	173775	TUBE,HYD,JIC,1.00x.083x20INCH
11	2	231070	BRNG,INSERT,1" BORE,YA100RRB,FAFNIR
12	4	231157	HOUSING,BRNG,2HOLE,52MM,FLANGETTE PLATED
13	1	601655	MTR,HY,3.0CUIN,1"KEY,SAE-A,TB-SERIES
14	1	050177	SHAFT,SHAKER 80XX,2006
15	1	193029	SHAKER,SPROCKET,80XX,2006

Options

Shaker Electric Spudnik



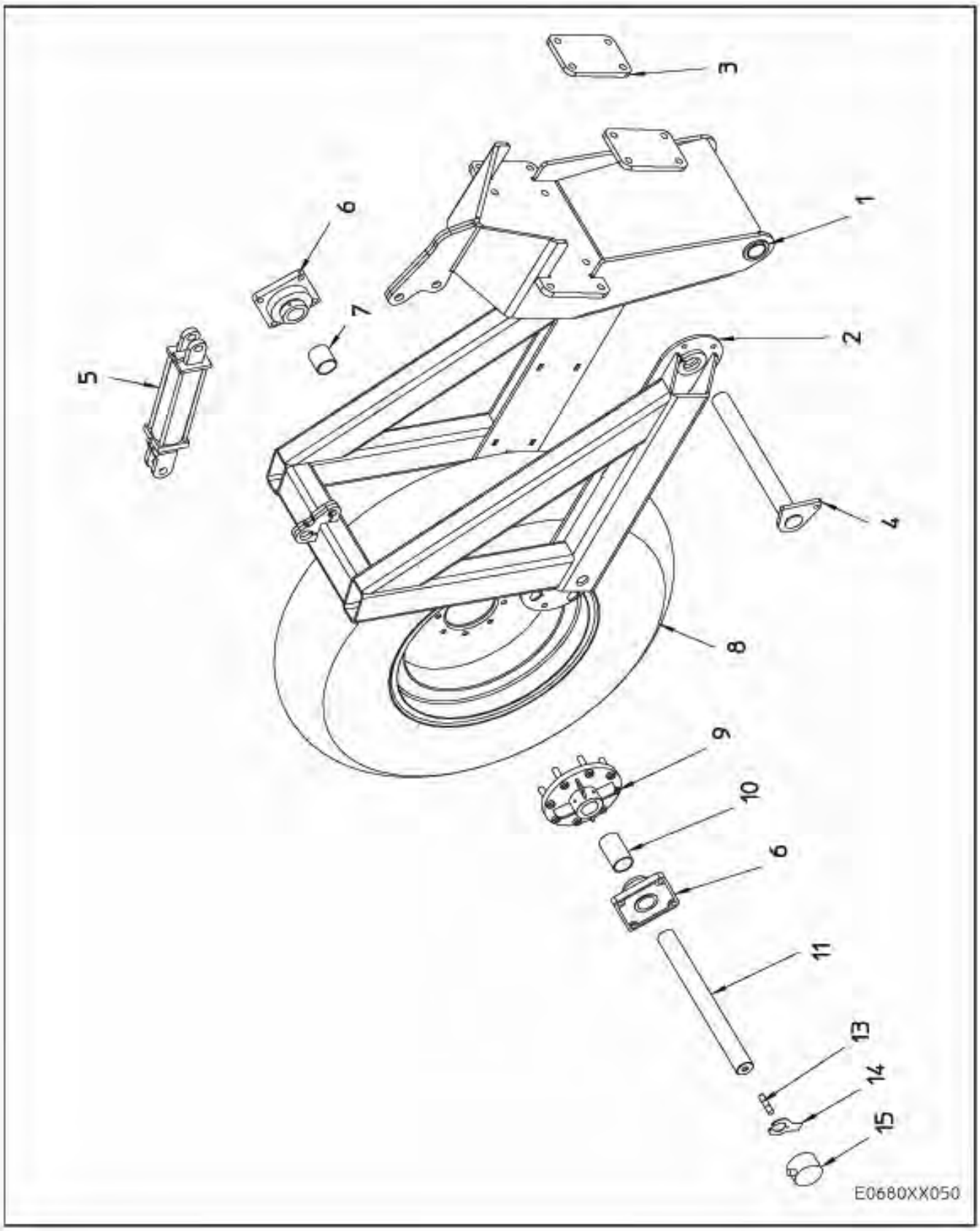
Options

Shaker Electric Spudnik

Pos.	Quantity	Part #	Description
1	1	501316	BOLT,CARRIAGE,3/8"-16UNC x 2" GR 2
2	2	231274	BRNG,PB,3/4"BORE,SET SCRW CLR,LGT DUTY
3	1	037.03154	ECCENTRIC [22x23,2]
4	1	174012	PLATE,ARM SHAKER
5	1	981500	KNOB,PLASTIC, W/THREAD INSERT 5/16"-18x2
6	1	B94.02864	E-MOT,M63x25,12V,2100 U/MIN
7	1	193752	SHAKER MOUNT ELEC 80XX
8	1	501284	NUT,LOCK,HEX,3/8"-16UNC NYLON INSERT
9	1	200.67924	RÜTTELSCHEIBE
10	1	B99.01936	GRUB SCREW M6X8 DIN916 [6x8]
11	1	B99.03150	CU-DICHTRING A 8X12X2 DIN7603
12	1	B99.02602	SNAPR.,15X1, EXT., DIN471

Options

2 Wheel Fixed



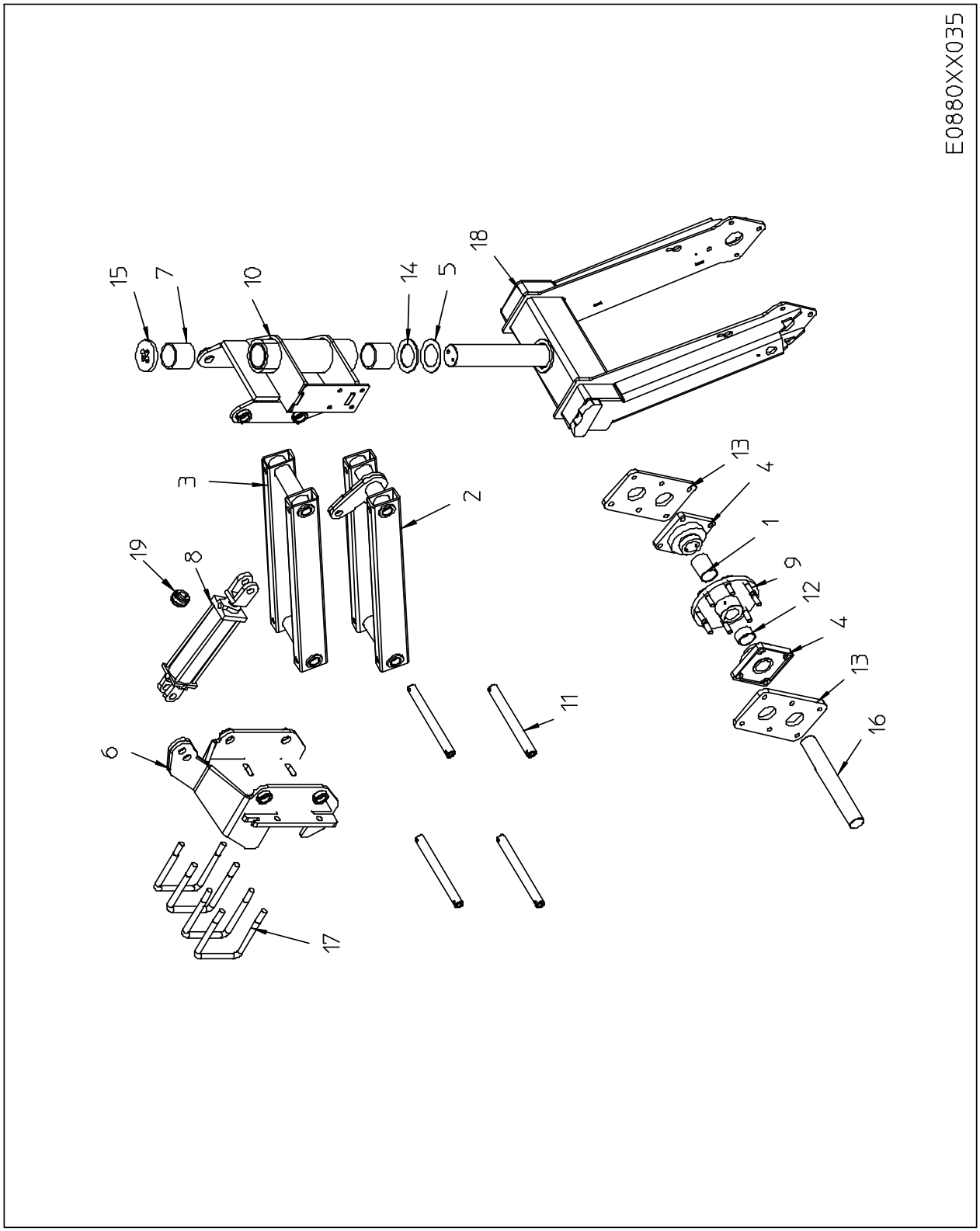
Options

2 Wheel Fixed

Pos.	Quantity	Part #	Despription
1	2	192963	WALKBEAM,MOUNT,80XX
2	2	193115	STATIONARY WHEEL BRACKET,80XX
3	4	173329	PLATE,CLAMP,W BEAM 80XX
4	2	192973	WALKBEAM,MOUNT,80XX
5	2	602530	CYLNDR,TIE,ROD,5X8" SAE 20-1/4"3000PSI
6	4	231120	BRNG,4BOLT,FLNG,TCJ 2",ECC LOCK
7	2	173503	PIPE, 2.067 ID,3.375 OD, 2.375 LNG
8	2	951273	TIRE,&,RIM,11.25x24/12 IMPLMNT 5620/5625
9	2	951381	HUB ASSY 8 HOLE 2" BORE
10	2	173504	PIPE, 2.067 ID,3.375 OD, 3.875 LNG
11	2	050185	SHAFT,DEPTH WHL,2" 80XX
13	1	173260	BOLT SAWED 5/8-11UNCx2-5/8
14	1	173261	ENCODER TORQUE ARM SHORT
15	1	B94.04155	SENSOR ENCODER,1024 I/U

Options

16" Caster



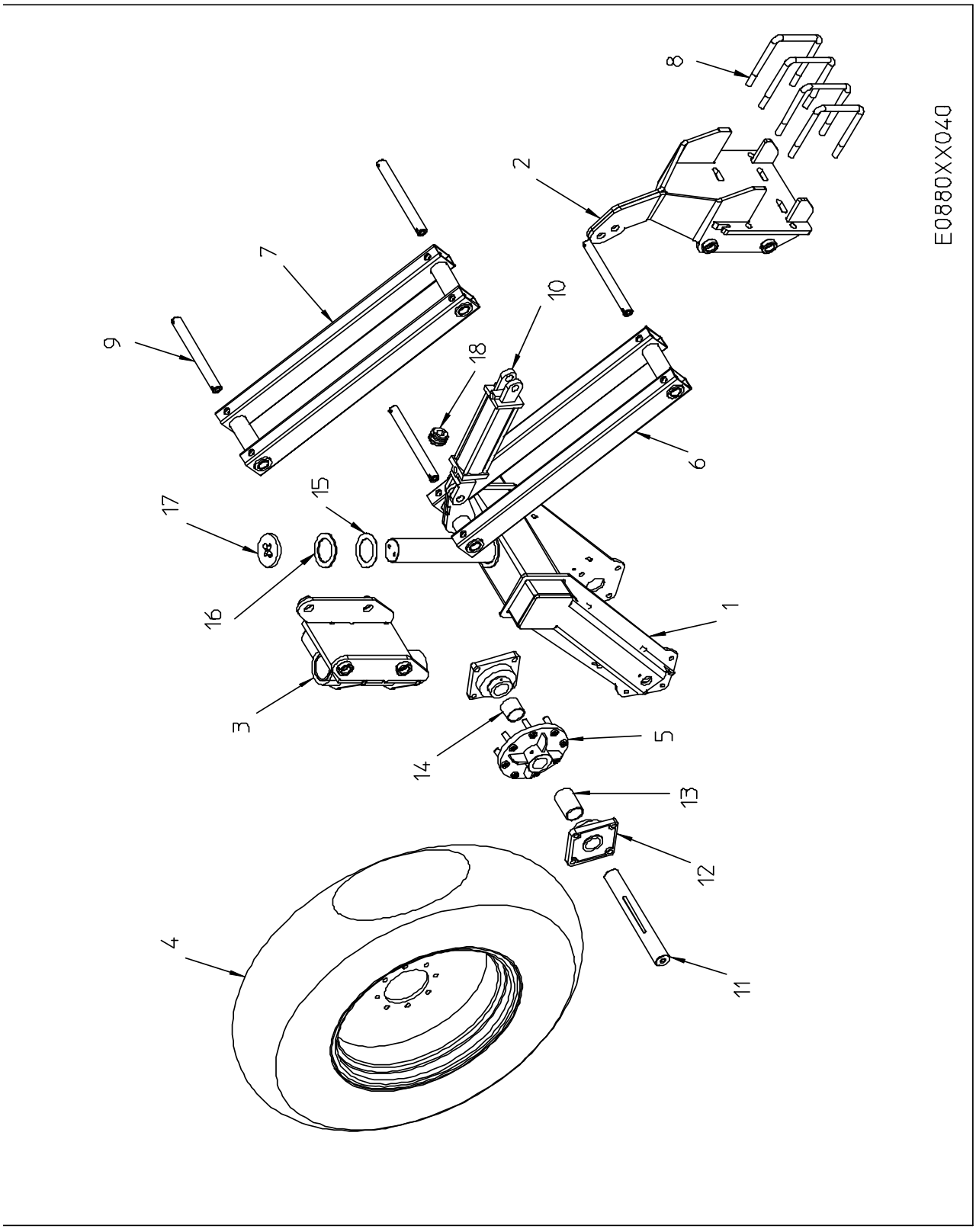
Options

16" Caster

Pos.	Quantity	Part #	Description
1	1	174065	PIPE,SPACER
2	1	193044	ARM,BOTTOM,CASTER,80XX,2006
3	1	193043	ARM,TOP,CASTER,80XX,2006
4	2	231120	BRNG,4BOLT,FLNG,TCJ 2",ECC LOCK
5	1	231166	BRNG,THRUST,4.5"ODx3"IDx.058 RBC FTS4872
6	1	192559	REAR LIFT BRACKET MODEL 80XX
7	2	181820	BUSHING,SUPPORT WHEEL MACHINED
8	1	601536	CYLNDR,TIE,ROD,3"x10" SAE 20-1/4"3000PSI
9	1	951381	HUB ASSY 8 HOLE 2" BORE
10	1	193045	MOUNT,CASTER,80XX,2006
11	4	050183	PIN,PIVOT,CASTER,80XX,2006
12	1	173927	TUBE,2.375OD,2.67IDx1.25LNG,80XX-2007
13	2	173926	PLATE,SMALL TIRE ON TALL ASSY,80XX-07
14	1	172047	PLATE WEAR CRAZY WHEEL
15	1	171447	CAP SUPPORT WHEEL
16	1	050098	SHAFT CRAZY WHEEL 24" MODEL 80XX
17	4	502408	U-BOLT,3/4"-10UNC x 6-3/4"W x 8-3/16"L
18	1	193046	BRACKET,CASTER,80XX,2006
19	1	601589	STOP,CYLNDR,STROKE,1-1/2",LONG CLIP ON

Options

24" Caster



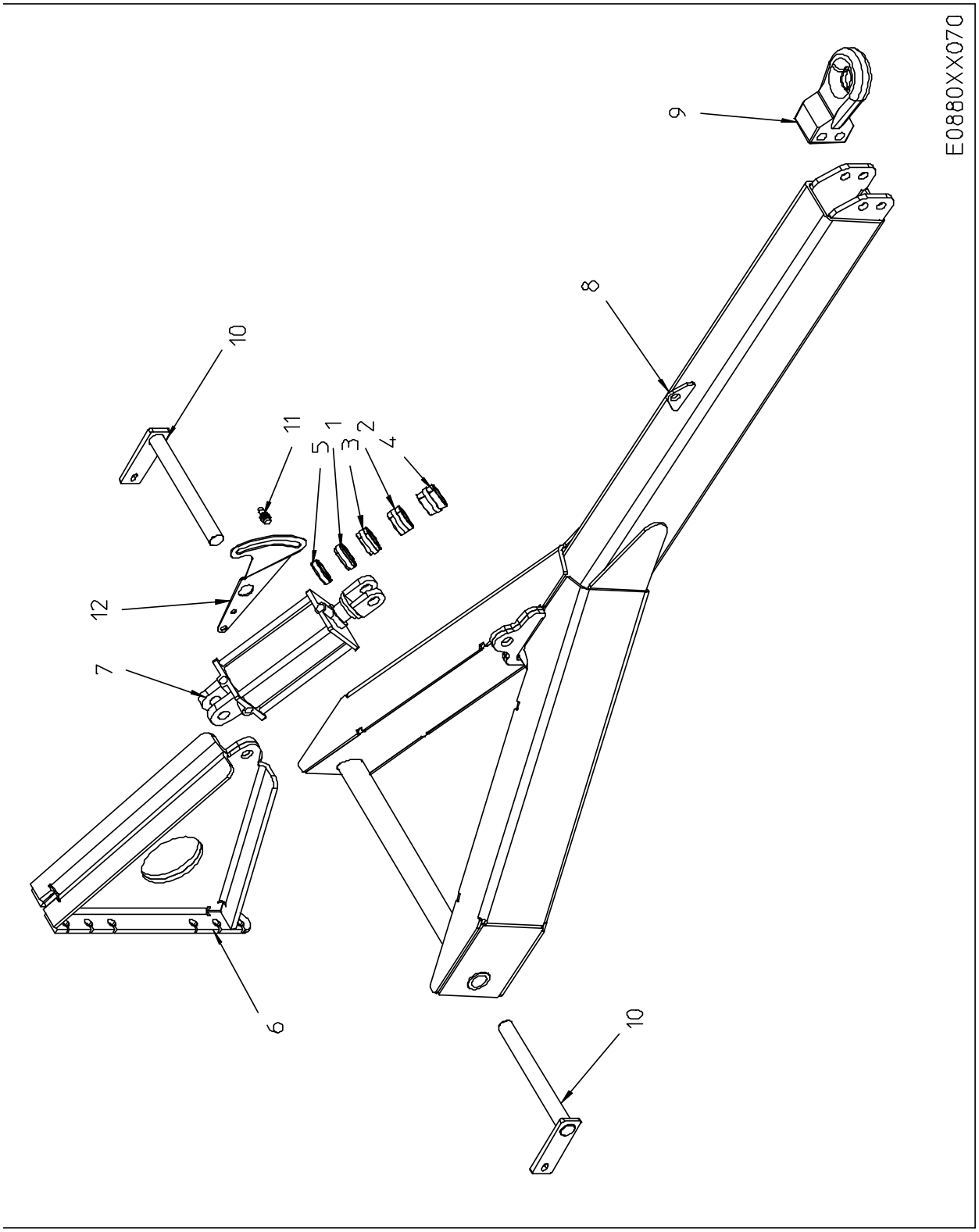
Options

24" Caster

Pos.	Quantity	Part #	Description
1	1	193046	BRACKET,CASTER,80XX,2006
2	1	192559	REAR LIFT BRACKET MODEL 80XX
3	1	193045	MOUNT,CASTER,80XX,2006
4	1	951273	TIRE,&,RIM,11.25x24/12 IMPLMNT
5	1	951381	HUB ASSY 8 HOLE 2" BORE
6	1	193044	ARM,BOTTOM,CASTER,80XX,2006
7	1	193043	ARM,BOTTOM,CASTER,80XX,2006
8	4	502408	U-BOLT,3/4"-10UNC x 6-3/4"W x 8-3/16"L
9	4	050183	PIN,PIVOT,CASTER,80XX,2006
10	1	601536	CYLNDR,TIE,ROD,3"x10" SAE 20-1/4"3000PSI
11	1	050098	SHAFT CRAZY WHEEL 24" MODEL 80XX
12	2	231120	BRNG,4BOLT,FLNG,TCJ 2",ECC LOCK
13	1	172351	PIPE SPACER 3-1/2" MODEL 80XX
14	1	172350	PIPE SPACER 2" MODEL 80XX
15	1	231166	BRNG,THRUST,4.5"ODx3"IDx.058 RBC FTS4872
16	1	172047	PLATE WEAR CRAZY WHEEL
17	1	171447	CAP SUPPORT WHEEL
18	1	601589	STOP,CYLNDR,STROKE,1-1/2",LONG CLIP ON

Options

Drawbar Assembly



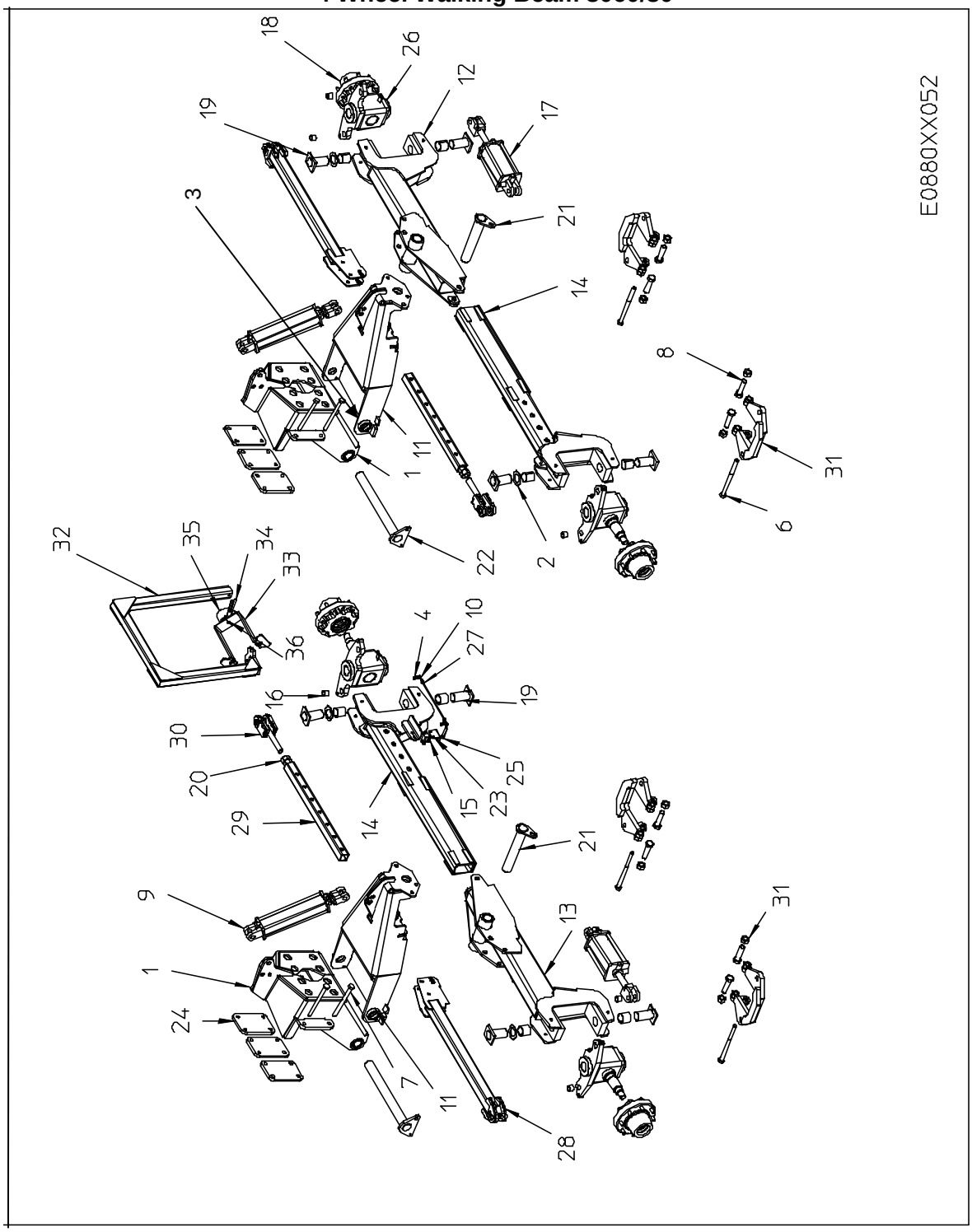
Options

Drawbar Assembly

Pos.	Quantity	Part #	Despription
1	1	602738	STOP,CYLNDR,STROKE,ASSY,1",2"ROD
2	1	602740	STOP,CYLNDR,STROKE,ASSY,1-1/2",2"ROD
3	1	602739	STOP,CYLNDR,STROKE,ASSY,1-1/4",2"ROD
4	1	602741	STOP,CYLNDR,STROKE,ASSY,2",2"ROD
5	1	602737	STOP,CYLNDR,STROKE,ASSY,3/4",2"ROD
6	1	194825	HITCH,EXTENTION
7	1	602530	CYLNDR,TIE,ROD,5"x8"x20-1/4"
8	1	193108	DRAWBAR,PLANTER,80XX,2006
8	1	193336	DRAWBAR,SHORT,80XX,2006
8	1	194376	DRAWBAR,LONG,80XX-2007
9	1	981263	HITCH,DRAWBAR,200-470HP
10	2	193110	PIN,1-5/8"OD,15-3/8"LNG
11	1	B94.01675	SENSOR,PROXIMITY,M18,NAMUR
12	1	173501	SENSOR,BRACKET,DRAWBAR, 80XX,2006

Options

4 Wheel Walking Beam 8060/80

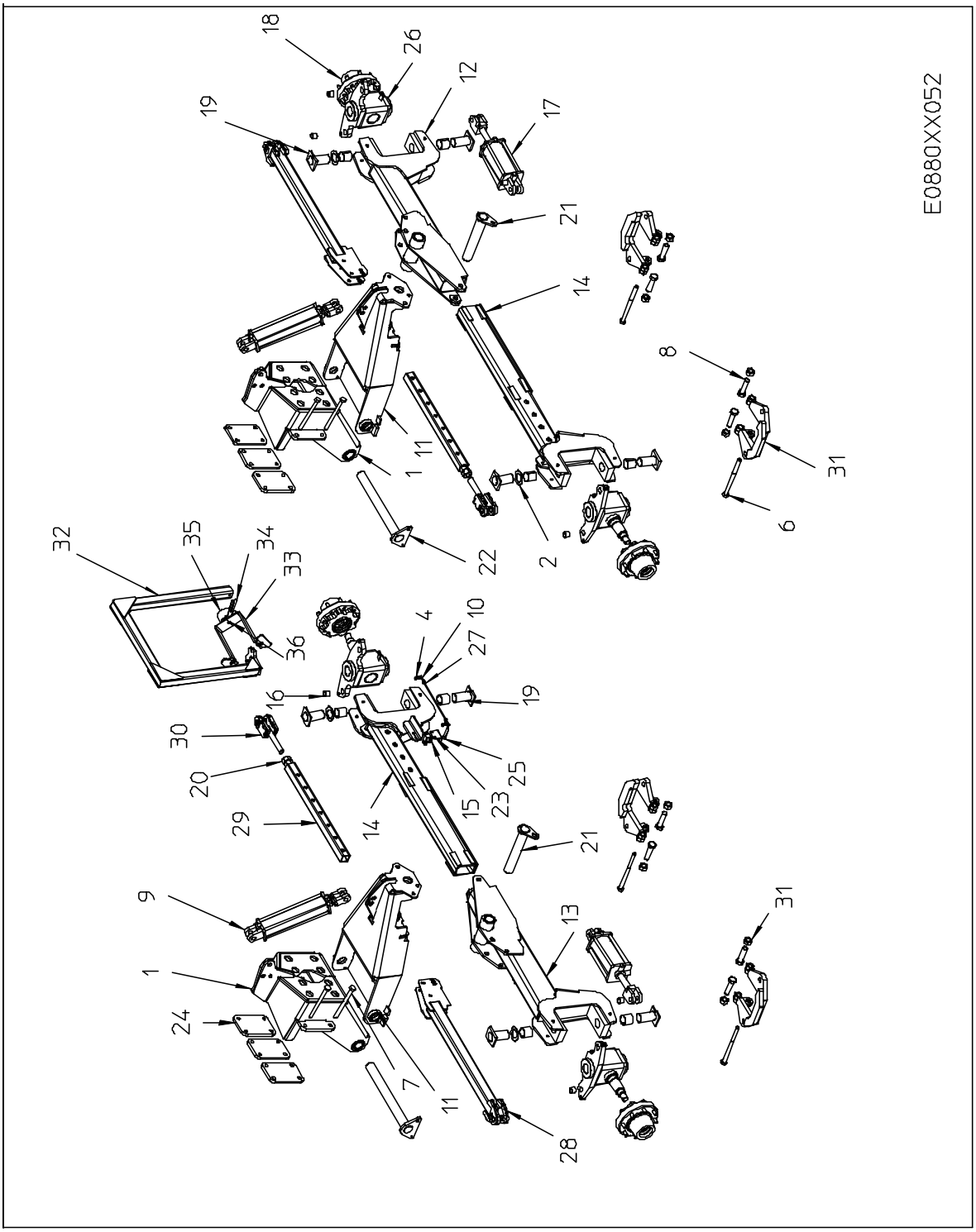


Options

4 Wheel Walking Beam 8060/80

Pos.	Quantity	Part #	Description
1	2	192963	WALKBEAM,MOUNT,80XX,2006
2	4	231252	BRNG,THRUST,PACK,2"IDx3"
3	8	231253	BRNG,JOURNAL,STEEL/PTFE,2" IDx2"
4	4	501808	NUT,HEX,1/4"-20UNC
5	8	501817	NUT,HEX,1"-8UNC
6	4	502315	BOLT,HEX,HD,3/4"-10UNC x 11" GR 5
7	4	502648	BOLT,HEX,HD,3/4"-10UNC x 9 GR 8
8	8	502679	BOLT,HEX,HD,1"-8UNF x 4" ALL THREAD
9	2	601385	CYLNDR,TIE,ROD,3"x12" SAE 22-1/4"
10	2	981935	ROD END,SWIVEL,1/4-28UNC 6058K25
11	2	192964	WALKBEAM,AXLE CAP,80XX,2006
12	1	194842	AXLE
13	1	194843	AXLE
14	2	194840	AXLE,TELESCOPING 80XX WALKING BEAM
15	1	B94.02350	A-SENSOR,090°,10-30V(STRG,MSEP)
16	6	231155	BUSHING,TENSION 1"ID x 1/8"WALL x 1"L
17	2	602414	CYLNDR,TIE,ROD,4"x6" 18-1/4 REPHASE
18	4	951174	HUB,COMPLETE,8HOLE,8"BC,6"PILOT 8000#
19	8	191933	KING PIN 6400 GS
20	2	502208	NUT,ACME,1-1/8"-5,RH,THREAD HEAVY
21	2	192965	PIN,WALKBEAM,80XX,2006
22	2	192973	PIN,FRONT,WALKBEAM,80XX,2006
23	1	174297	PLATE,MOUNT,POT,PLANTER
24	6	173329	PLATE,CLAMP,W BEAM 80XX
25	1	194845	POT,ARM

Options
4 Wheel Walking Beam 8060/80



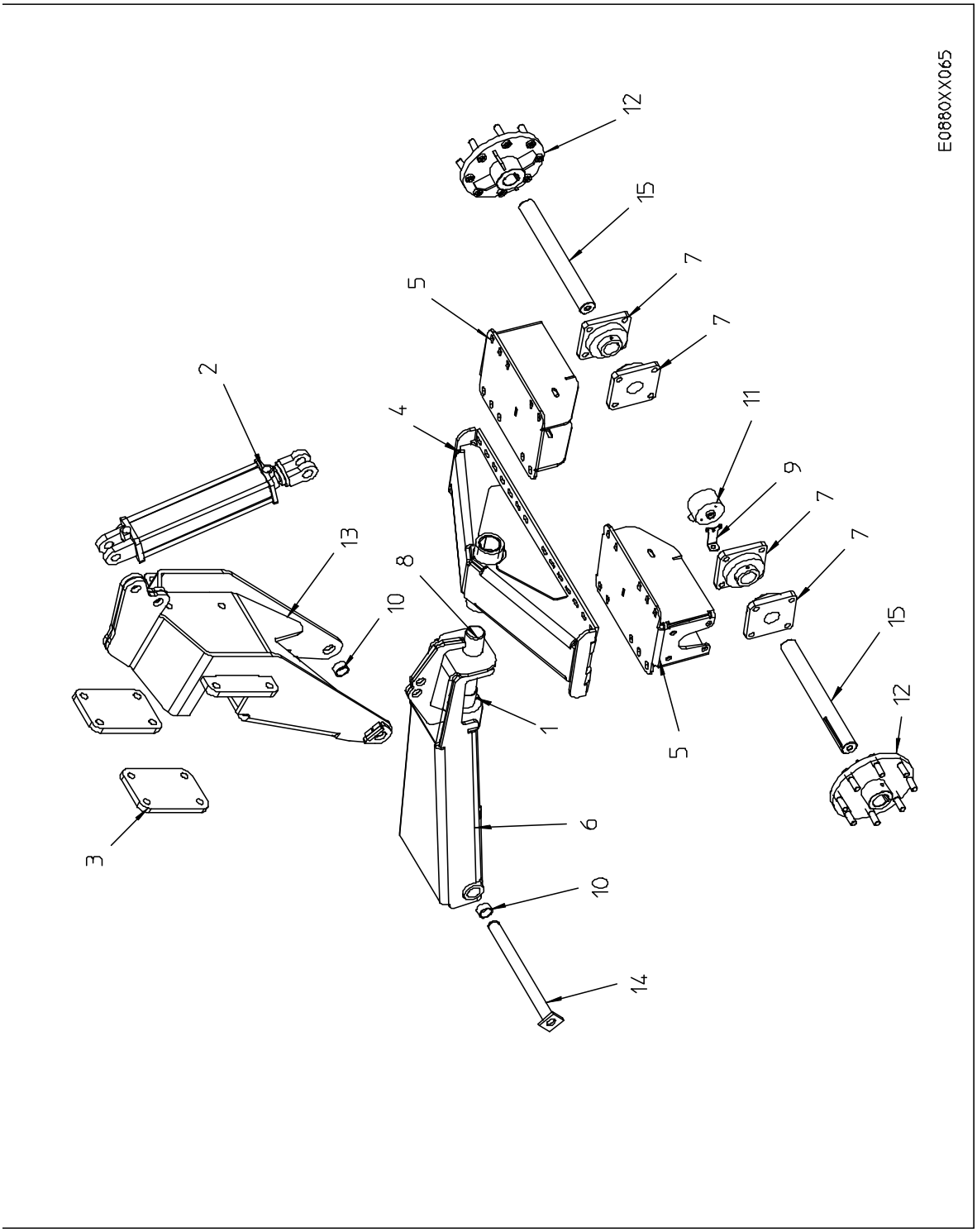
Options

4 Wheel Walking Beam 8060/80

25	1	194845	POT,ARM
26	4	194847	SPINDLE,BLOCK WALKING BEAM 80XX
27	1	040114	THREADED,ROD
28	2	192622	TIEROD,BEAM 8060-2005
29	2	191984	TIEROD,ADJ RH STRNG 6140
30	2	194191	TIE ROD END,W BEAM,80XX-2007
31	4	194868	STOP BRACE
32	1	193855	ARM,ENCODER,STEER WB,80XX
33	1	194534	BRACKET
34	1	173455	ARM,ENCODER,LONG
35	1	B94.04155	SENSOR,ENCODER,10241/U,M12X1
36	1	501291	PIN,ROLL,1/8" x 3/4"

Options

4 Wheel Walking Beam 8040



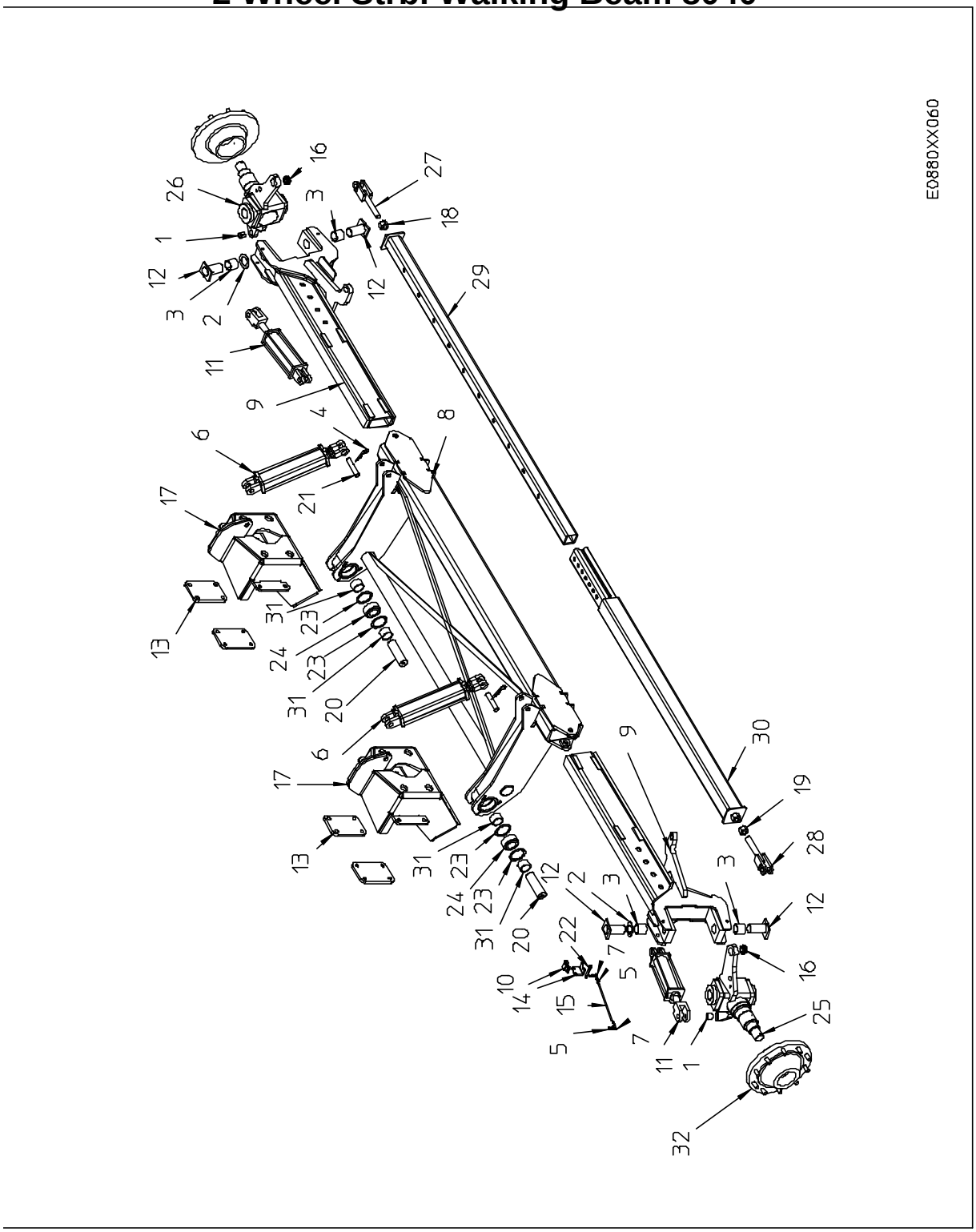
Options

4 Wheel Walking Beam 8040

Pos.	Quantity	Part #	Description
1	4	231253	BRNG,JOURNAL,STEEL/PTFE,2" IDx2"
2	2	601385	CYLNDR,TIE,ROD,3"x12" SAE 22-1/4"
3	4	173329	PLATE,CLAMP,W BEAM 80XX
4	2	192682	AXLE,BEAM 8040-2005
5	4	192617	MOUNT,WHEEL,W BEAM 8060-2005
6	2	192612	AXLE,PIVOT,BEAM,LT 8060-2005
7	8	231163	BRNG,4BOLT,FLNG,1-3/4"BORE ECCENTRIC LCK
8	2	192005	PIVOT PIN 4-WHEEL AXLE 6400-2004
9	2	173272	BRACKET,SENSOR,WBA 8060-2005
10	4	181825	BUSHING,REAR,LIFT,PARALLEL,ARM
11	2	B94.04155	SENSOR,ENCODER,10241/U,M12X1
12	4	951347	HUB,CAST,8HOLE,1-3/4"BORE,CRAZY WHL
13	2	192588	MOUNT,CYLINDER,BEAM 80XX
14	2	192615	PIN,PIVOT,W BEAM 8060-2005
15	4	050110	SHAFT,WALKING BEAM 8060-2005

Option

2 Wheel Strbl Walking Beam 8040



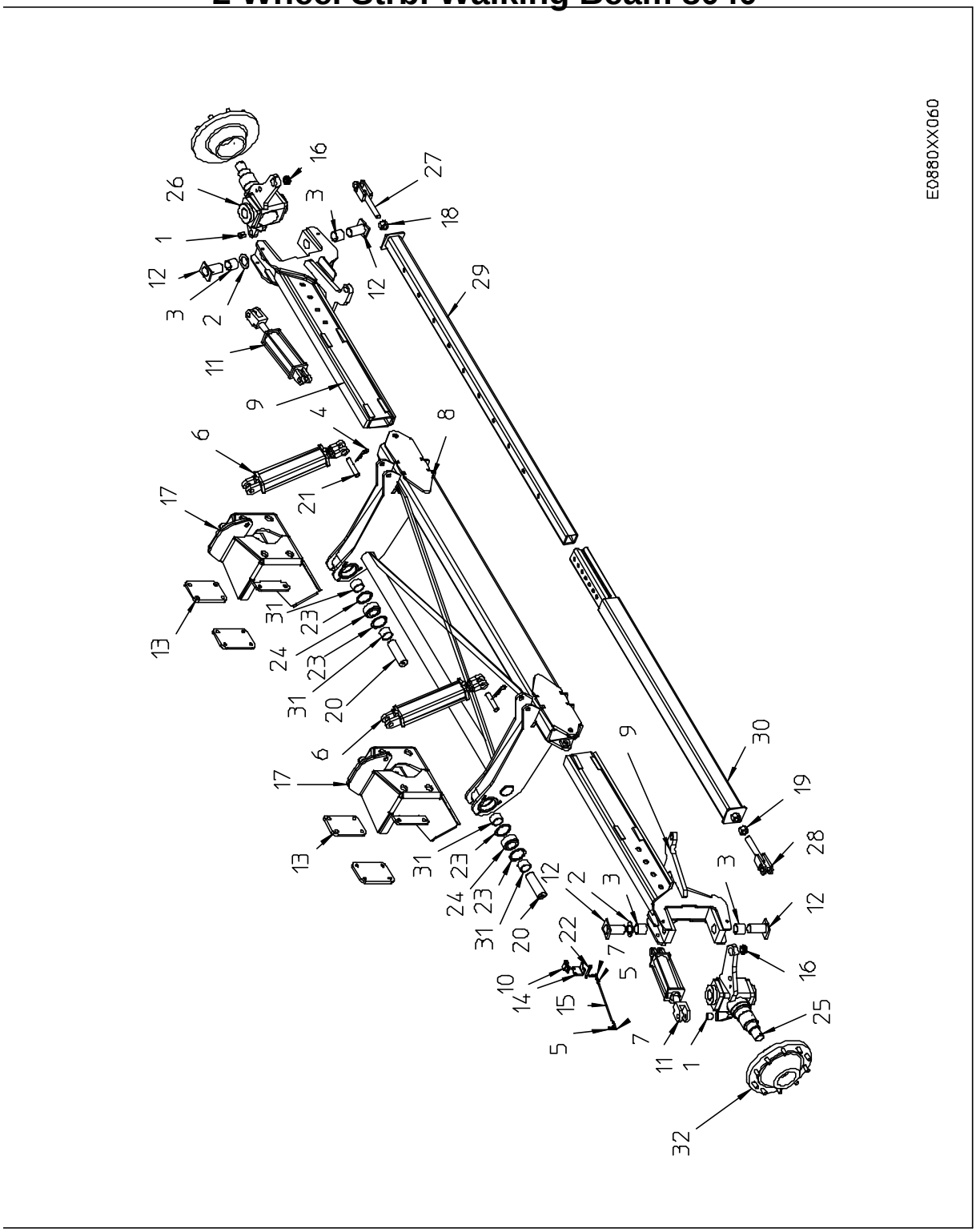
Options

2 Wheel Strbl Walking Beam 8040

Pos.	Quantity	Part #	Description
1	2	231155	BUSHING,TENSION 1"ID x 1/8"WALL x 1"L
2	2	231252	BRNG,THRUST,PACK,2"IDx3" 114 OD,FTS3252
3	4	231253	BRNG,JOURNAL,STEEL/PTFE,2" IDx2",CJS3232
4	2	501220	HAIRPIN,COTTER,3/16"x3-3/4" #21-08
5	4	501808	NUT,HEX,1/4"-20UNC
6	2	601385	CYLNDR,TIE,ROD,3"x12" SAE 22-1/4"
7	2	981935	ROD END,SWIVEL,1/4-28UNC 6058K25
8	1	194871	AXLE,
9	2	194870	AXLE,TELESCOPING
10	1	B94.02350	A-SENSOR,090°,10-30V(STRG,MSEP)
11	2	602106	CYLNDR,TIE,ROD,3"x6"x1-1/4",18"PINTOPIN
12	4	191933	KING PIN 6400 GS
13	4	173329	PLATE,CLAMP,W BEAM 80XX
14	1	174297	PLATE,MOUNT,POT,PLANTER
15	1	40115	METER,0-100A,DC SCPR IBE EM3359
16	2	231102	BRNG,INSERT,1"BORE SPHR OD CYL END COM16
17	2	194495	MOUNT,AXLE,STEERABLE 8040-2007
18	1	502316	NUT,ACME,1-1/8"-5,LH,THREAD HEAVY HEX CS
19	1	502208	NUT,ACME,1-1/8"-5,RH,THREAD HEAVY HEX CS
20	2	50432	PIN,CYLINDER,HOLDING TANK,HARV-2006

Option

2 Wheel Strbl Walking Beam 8040



Option

2 Wheel Strbl Walking Beam 8040

21	2	50351	PIN,CYLINDER,HOLDING TANK,HARV-2006
22	1	194845	POT,ARM
23	4	981884	RING,RETAINING,3.5IN
24	2	231328	BEARING,SPHERICAL PLAIN,2"ID,3.5"OD
25	1	194612	SPINDLE,12 DEG,LH 8047
26	1	194609	SPINDLE,12 DEG,RH 8047
27	1	171431	TIEROD,END,LH
28	1	171430	TIEROD,END,RH
29	1	172826	TIE ROD,WELD INNER 6400/6160/5640-2005
30	1	192683	WELD,TIEROD OUTER TUBE 6300-2005
31	4	090237	TUBE
32	2	951175	HUB,COMPLETE,10HOLE,13.187"BC,11"PILOT

Options

Tires

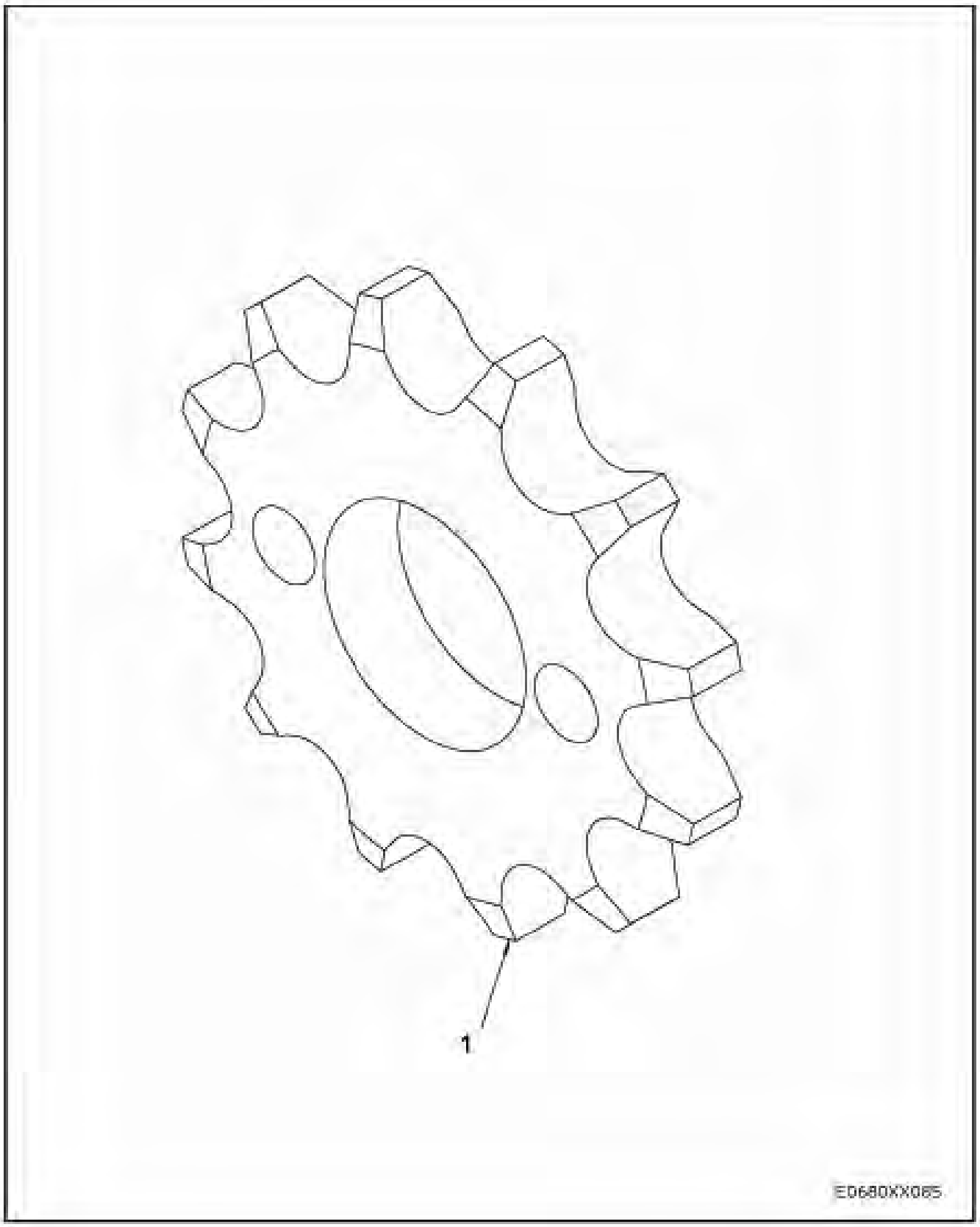
Options

Rear Tires

Pos.	Quantity	Part #	Description
1	1	951427	tire_n_rim_24.9x24_LH_R4_tread
2	1	951428	tire_n_rim_24.9x24_RH_R4_tread
3	1	951280	tire_n_rim
4	1	951273	tire_rim.04.1
5	1	951434	tire_n_rim_grader_14x24_16ply_RH.1
6	1	951271	tire_n_rim_grader_14x24_16ply_LH.1
7	1	951390	tire_rim_14.9x24_DT
8	1	951380	RIB_Tire_Rim_11.25x24.1.1

Options

Seed Spacing



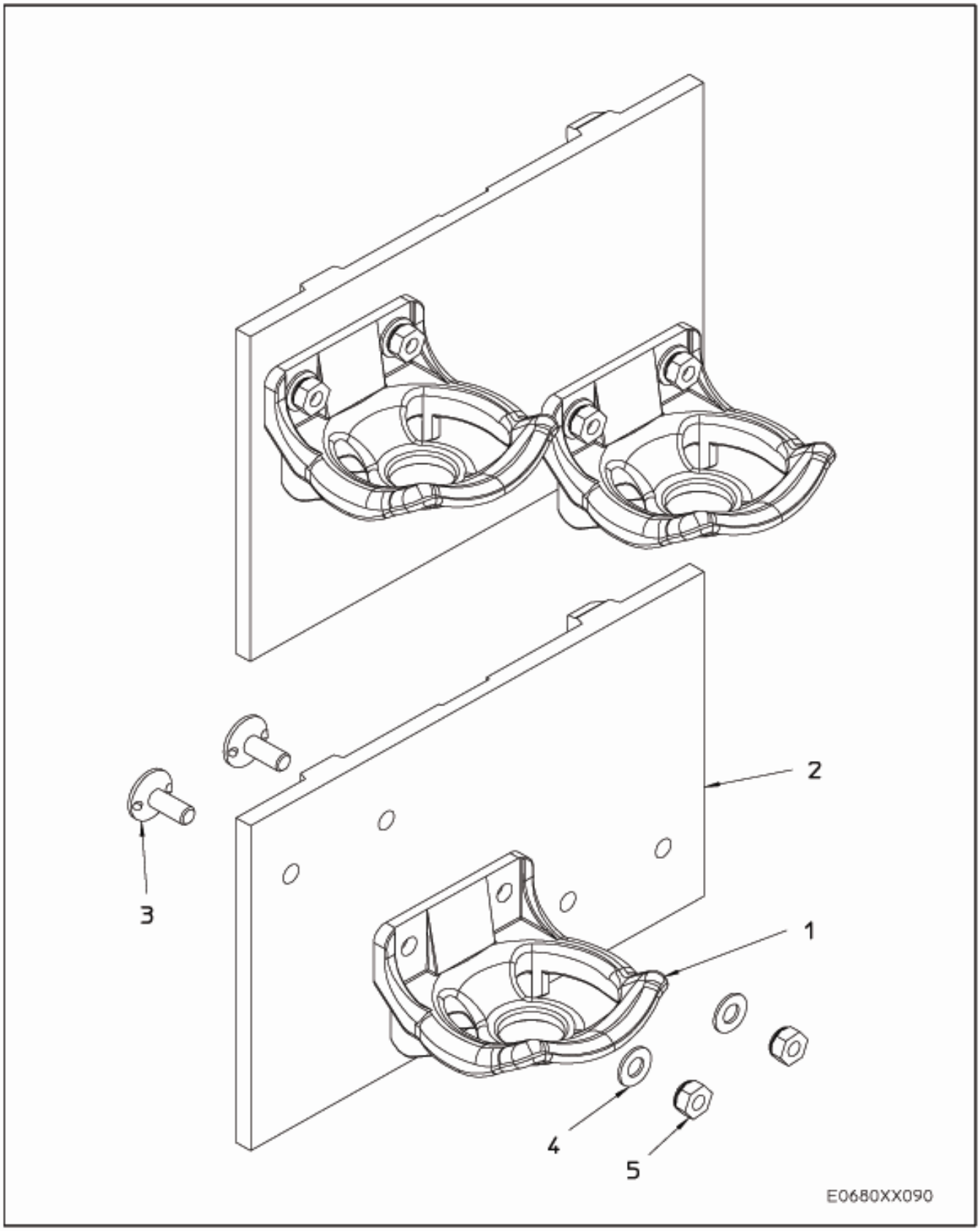
Options

Seed Spacing

Pos.	Quantity	Part #	Despription
1	1	881287	SPRCKT,60A12x1-1/4" BORE 2003 MDL
1	1	881288	SPRCKT,60A13x1-1/4" BORE 2003 MDL
1	1	881289	SPRCKT,60A14x1-1/4" BORE 2003 MDL
1	1	881290	SPRCKT,60A15x1-1/4" BORE 2003 MDL
1	1	881291	SPRCKT,60A16x1-1/4" BORE 2003 MDL
1	1	881292	SPRCKT,60A17x1-1/4" BORE 2003 MDL
1	1	881293	SPRCKT,60A18x1-1/4" BORE 2003 MDL
1	1	881294	SPRCKT,60A19x1-1/4" BORE 2003 MDL
1	1	881295	SPRCKT,60A20x1-1/4" BORE 2003 MDL
1	1	881296	SPRCKT,60A21x1-1/4" BORE 2003 MDL
1	1	881297	SPRCKT,60A22x1-1/4" BORE 2003 MDL
1	1	881298	SPRCKT,60A23x1-1/4" BORE 2003 MDL
1	1	881299	SPRCKT,60A24x1-1/4" BORE 2003 MDL
1	1	881300	SPRCKT,60A25x1-1/4" BORE 2003 MDL
1	1	881301	SPRCKT,60A26x1-1/4" BORE 2003 MDL
1	1	881302	SPRCKT,60A27x1-1/4" BORE 2003 MDL
1	1	881303	SPRCKT,60A28x1-1/4" BORE 2003 MDL

Options

Red Cups



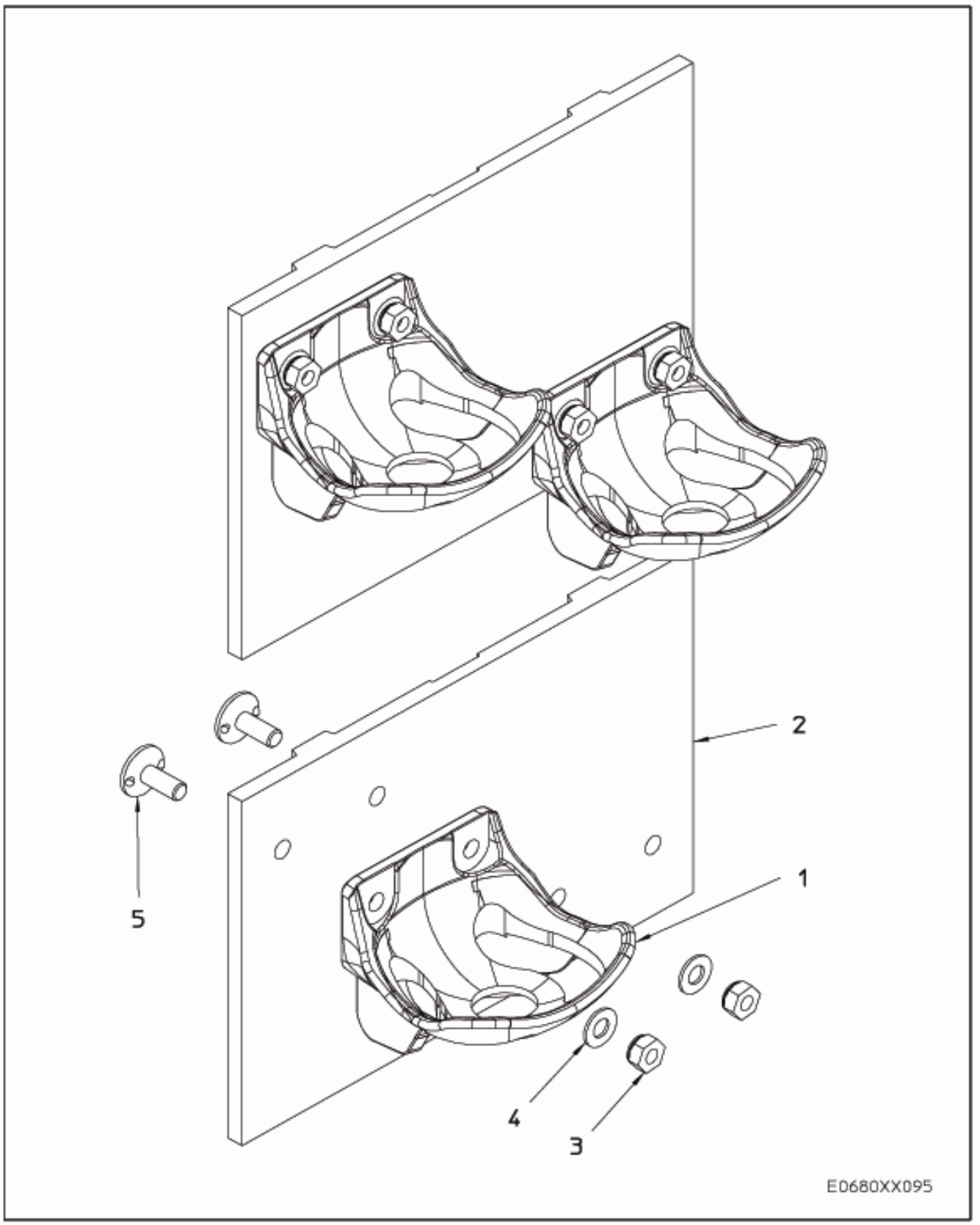
Options

Red Cups

Pos.	Quantity	Part #	Despription
		200.67487	CUP BELT 40 (RED)
1	40	088.00937	SLOTTED CUP RED
2	1	200.56433	ELEVATORBELT VZ ROTE BECHER
3	80	099.00187	ELEVATOR SCREW [m6]
4	80	B99.03086	PLAIN WASHER 6,5X13X1 GALV (AR [6.5]
5	80	B99.01806	HEXAGON NUT DIN985-M6-8-GAL [m6]

Options

Green Cups



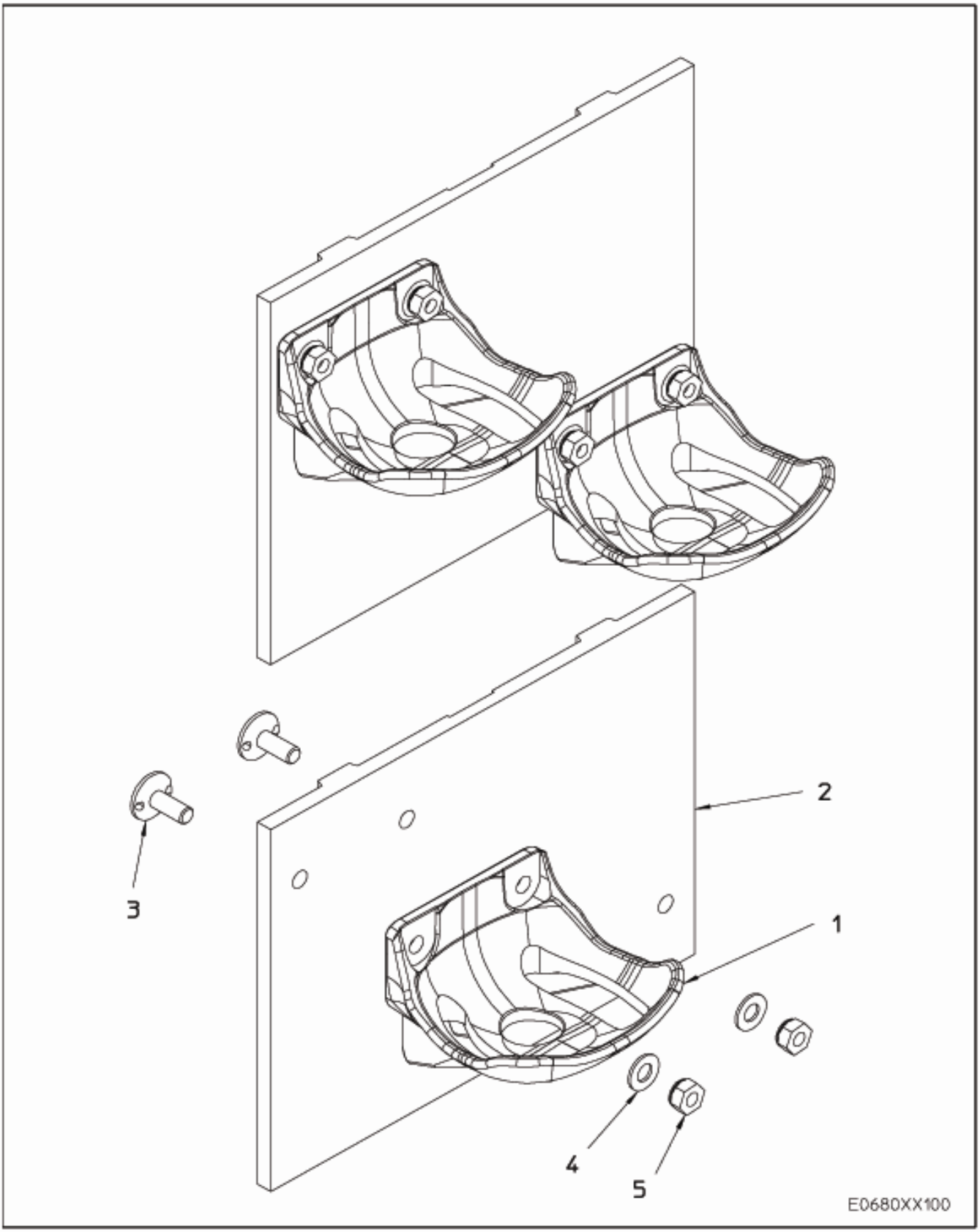
Options

Green Cups

Pos.	Quantity	Article	Despription
		200.61470	ELV WEB BELT GREEN GATE BREAKER
1	36	088.00909	GREEN GRID CUP
2	1	200.56437	ELVATORBELT VZ GRÜNE BECHER
3	72	B99.01806	HEXAGON NUT DIN985-M6-8-GAL [m6]
4	72	B99.03086	PLAIN WASHER 6,5X13X1 GALV (AR [6.5]
5	72	099.00187	ELEVATOR SCREW [m6]

Options

Blue Cups



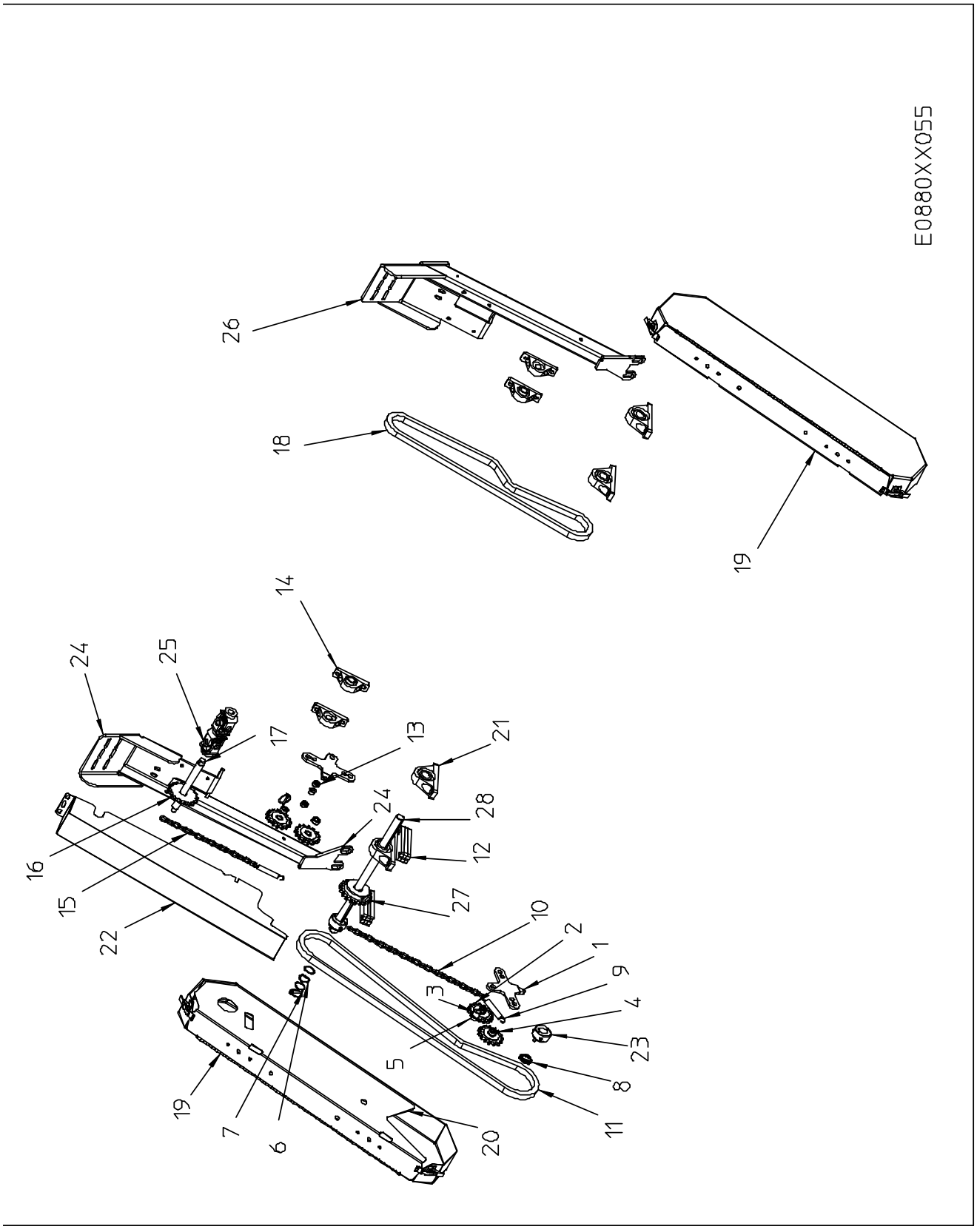
Options

Blue Cups

Pos.	Quantity	Part #	Despription
		200.56434	ELEVATOR BELT P184 [190x2760] (BLUE)
1	30	088.00708	BUCKET BLUE [x]
2	1	200.56435	ELV BELT bl BECHER KEIL VZ
3	60	099.00187	ELEVATOR SCREW [m6]
4	60	B99.03086	PLAIN WASHER 6,5X13X1 GALV (AR [6.5]
5	60	B99.01806	HEXAGON NUT DIN985-M6-8-GAL [m6]

Options

Mechanical Drive

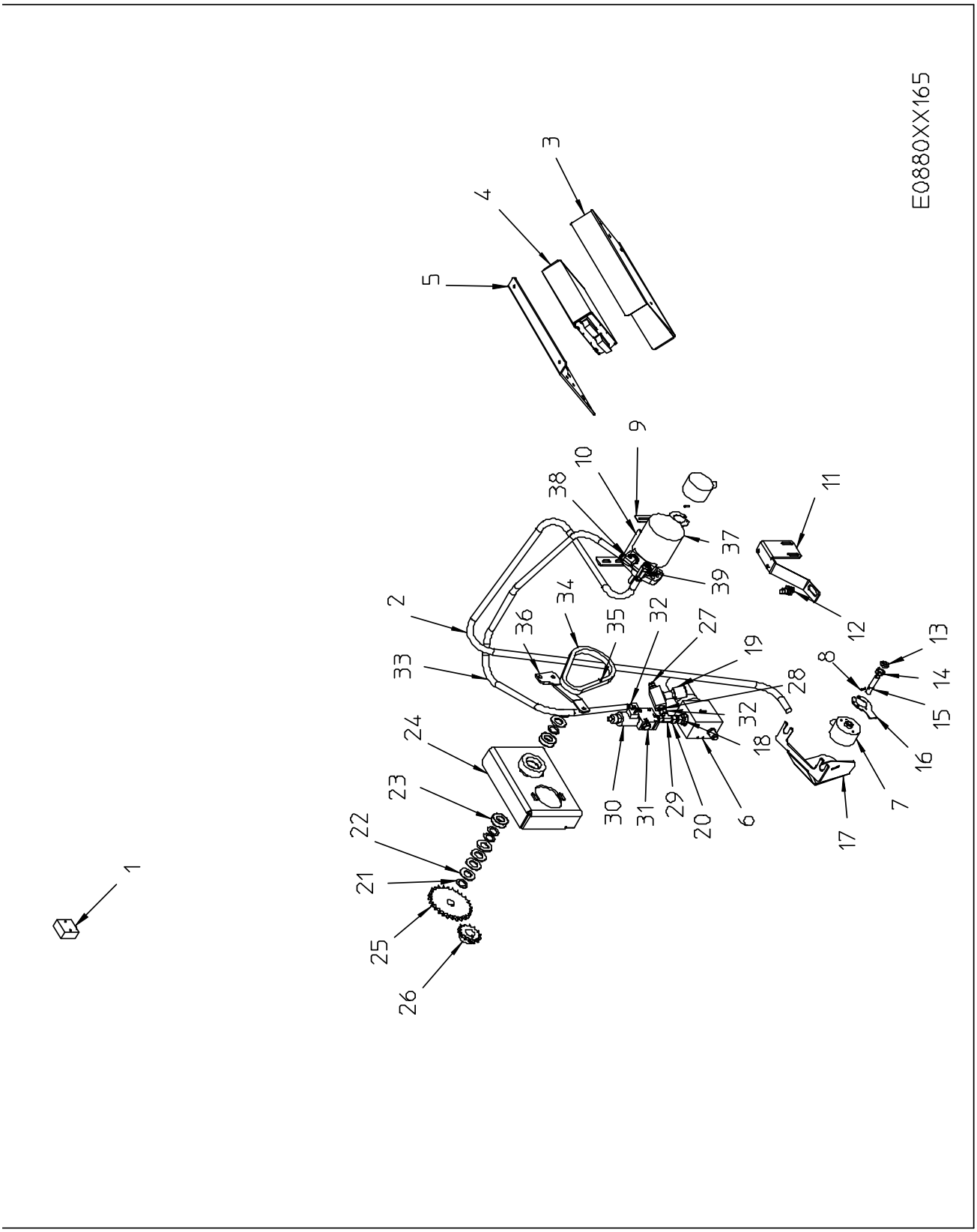


Mechanical Drive

Pos.	Quantity	Part #	Description
1	2	172064	PLATE IDLER ADJUSTER
2	4	881079	IDLER,60,PITCH,5/8" BORE 15 TOOTH #709
3	1	172186	SPACER,IDLER ADJ ROW UNIT 7/8"LNG
4	4	501900	COLLAR,SHAFT,SET,SCREW,5/8"
5	2	231167	BUSHING,FLNG,.75"ODx.50"IDx5/8"L 1/8"FNG
6	2	502445	WASHER,WAVY,1.62 SSR-0162
7	4	981457	SHIM,1.625"OD x .150"WALL x .024"THICK
8	3	502446	PIN,LINCH,5/16"OD x 1-9/16"LG W/RING
9	2	981456	SPRING,EXTENSION,3/4" x.085" WIREx5"LNG
10	1	352387	CHN,LINK,3/16"x23"
11	1	352264	CHN,RLR,60, MEC. DRIVE 89"LG PLANTER
12	6	173269	PLATE SPACER MECH DRIVE 8060
13	2	501917	COLLAR,SHAFT,SET,SCREW,1/2"
14	4	231061	BRNG,PB,1" BORE SAS
15	1	352253	CHN,LINK,3/16" x 16 LINKS
16	1	881039	SPRCKT,H60BS18x1" BORE
17	1	050324	SHAFT,MECH DRIVE 80XX,2007
18	1	352302	CHN,RLR,60 PITCH x 75 INCHES
19	1	194826	SHIELD,LOWER,LH
20	1	194827	SHIELD,LOWER,RH
21	4	231063	BRNG,PB,1-1/4",TAS 1.1/4 FAFNIR ECC.LOCK
22	1	194194	SHIELD,DRIVE,MECH,LH,80XX-2007
23	2	132348	ASSY,SEED SPACING HUB,2004
24	1	194196	BRACKET,MECH DRIVE RH,80XX,2007
25	1	B95.01207	CARDAN SHAFT 220mm [220]
26	1	194017	BRACKET,MECH DRIVE LH,80XX,2007
27	1	881114	SPRCKT,H60BS20x1-1/4" BORE
28	1	050104	SHAFT MODEL 80XX

Options

Hydraulic Drive



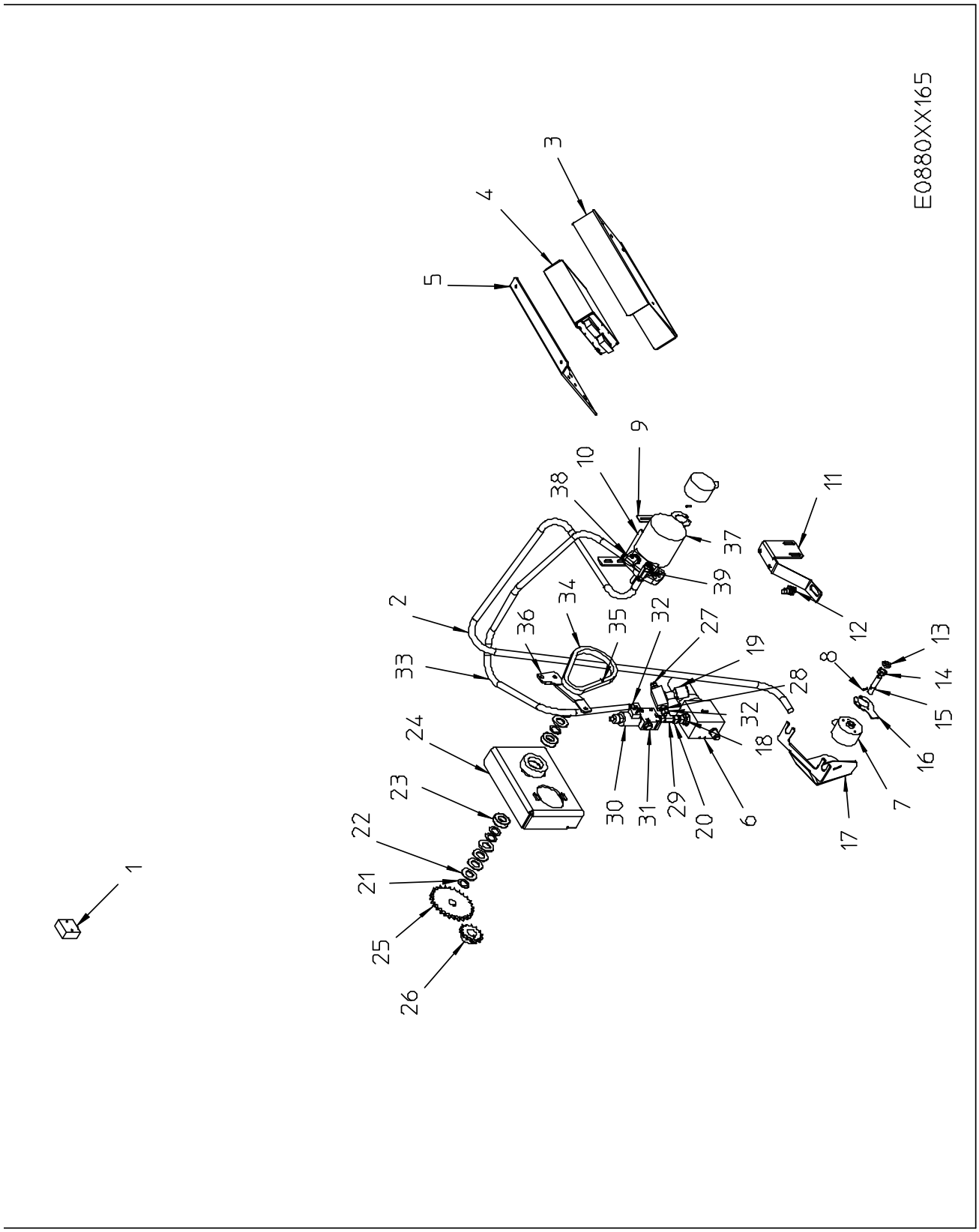
Options

Hydraulic Drive

Pos	Quantity	Part #	Description
1	1	B94.03535	SENSOR,INCLINATION,+/-20DEG
2	1	601679	HOSE,ASSEM,1/2"x84"(7FT)8FJS-8FJS
3	1	192645	COVER PANEL MDA MODEL 80XX
4	1	B94.03000	MDA-MAIN ELECTRONIC
5	1	173229	MOUNT PANEL MDA MODEL 80XX
6	1	602329	FILTER,HIGH PRESSURE 10M
7	2	B94.04155	SENSOR,ENCODER,10241/U,M12X1
8	2	501291	PIN,ROLL,1/8" x 3/4"
9	1	173455	ARM,ENCODER,LONG
10	1	173262	BRACKET HYD DRIVE MODEL 80XX
11	1	173275	SENSOR BRACKET DEPTH WHEEL 80XX
12	1	B94.01675	SENSOR,PROXIMITY,M18,NAMUR
13	1	501935	WASHER,LOCK,SPLIT,5/8"
14	1	501254	NUT,HEX,JAM,5/8"-11UNC
15	1	173260	BOLT SAWED 5/8-11UNCx2-5/8
16	1	173261	ENCODER TORQUE ARM SHORT
17	1	173456	ENCODER_SHIELD 80XX,2006
18	2	601993	CPLG,HYD,STR,6400-8-12 (8MJ-12MB)
19	1	602151	VALVE, LINE, NEEDLE, SIZE 12, SAE-8
20	1	601849	CPLG,HYD,STR,6565-8-8(8FJ-8FJ)
21	5	981697	SHIM,1.5"ODx1"IDx.031"THICK
22	5	501227	WASHER,FLAT,1"
23	2	231260	BRNG,25MMIDx52MMODx15MMW,205PP
24	1	192590	MOUNT HYD MOTOR ROW UNIT 8060

Options

Hydraulic Drive



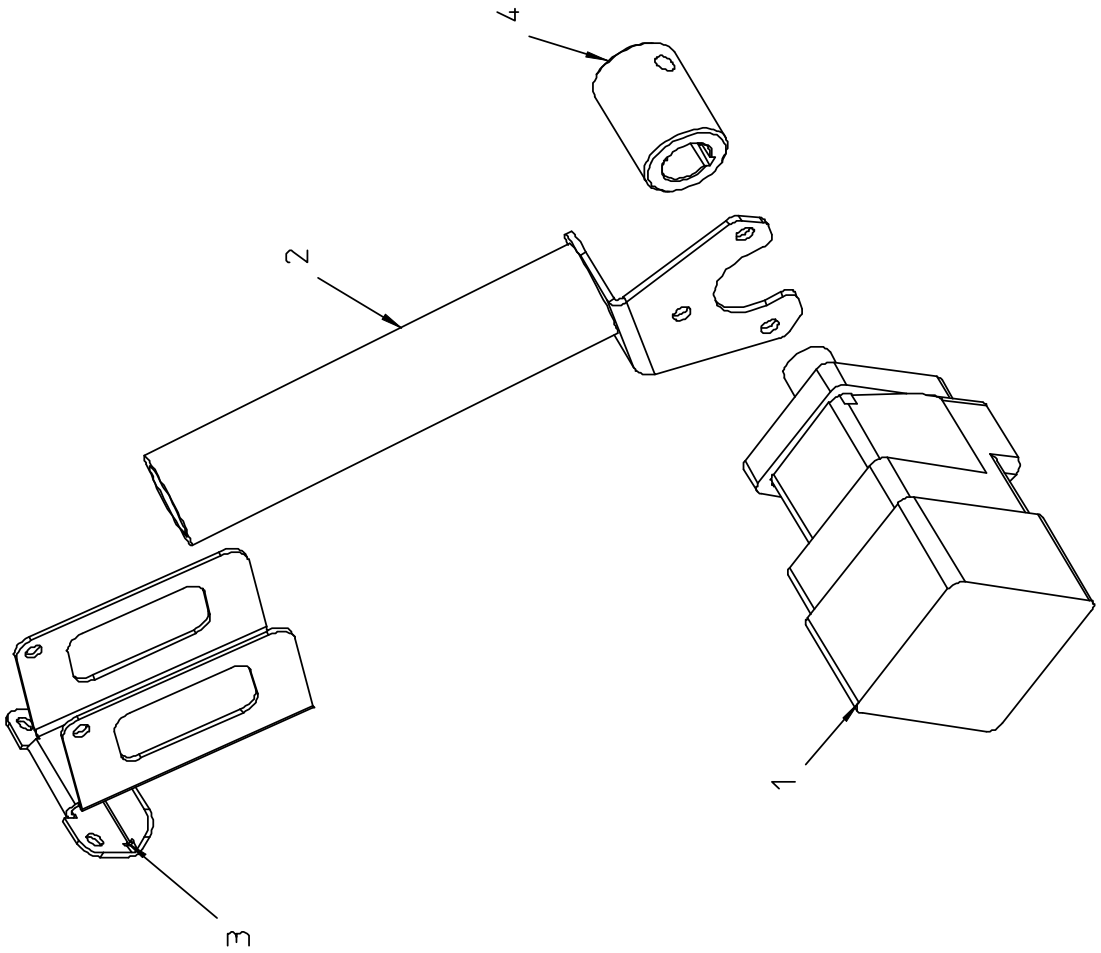
Options

Hydraulic Drive

Pos	Quantity	Part #	Description
25	1	881318	SPRCKT,H50 BS28x25MM BORE,1/4"KEY
26	1	881317	SPRCKT,H50 BS14x1-1/4"BORE,5/16"KEY
27	1	601457	CPLG,HYD,STR,6400-8-8 (8MJ-8MB)
28	2	601892	CPLG,HYD,STR,6402-08-08 (8MORB-8FJS)
29	1	601396	CPLG,HYD,TEE,2603-8-8-8 (8MJ-8MJ-8MJ)
30	1	602331	FLOW CONTROL VALVE ELECTRIC 5GPM 3-WAY
31	1	601575	PLUG,HYD,6408-8-0(8MB-0)HX HD
32	1	601443	CPLG,HYD,90DEG,6801-8-8 (8MJ-8MB)
33	1	601721	HOSE,ASSEM,1/2"x96"(8FT) 8FJS-8FJS 8M3K
34	1	352388	CHN,RLR,50 PITCH X 23-1/8"
35	1	351008	CHN,RLR,50 PITCH X 23-1/8"
36	1	173806	TORQUE BAR,HYD DRIVE 80XX,2007
37	1	602096	MTR,HY,9.9CUIN,1-1/4"KEY
38	1	601637	CPLG,HYD,90DEG,6801-8-10 (8MJ-10MB)
39	1	601750	CPLG,HYD,TEE,6803-8-8-10 (8MJ-8MJ-10MB)

Hydraulic Drive Spudnik Row Unit

E0880XX015



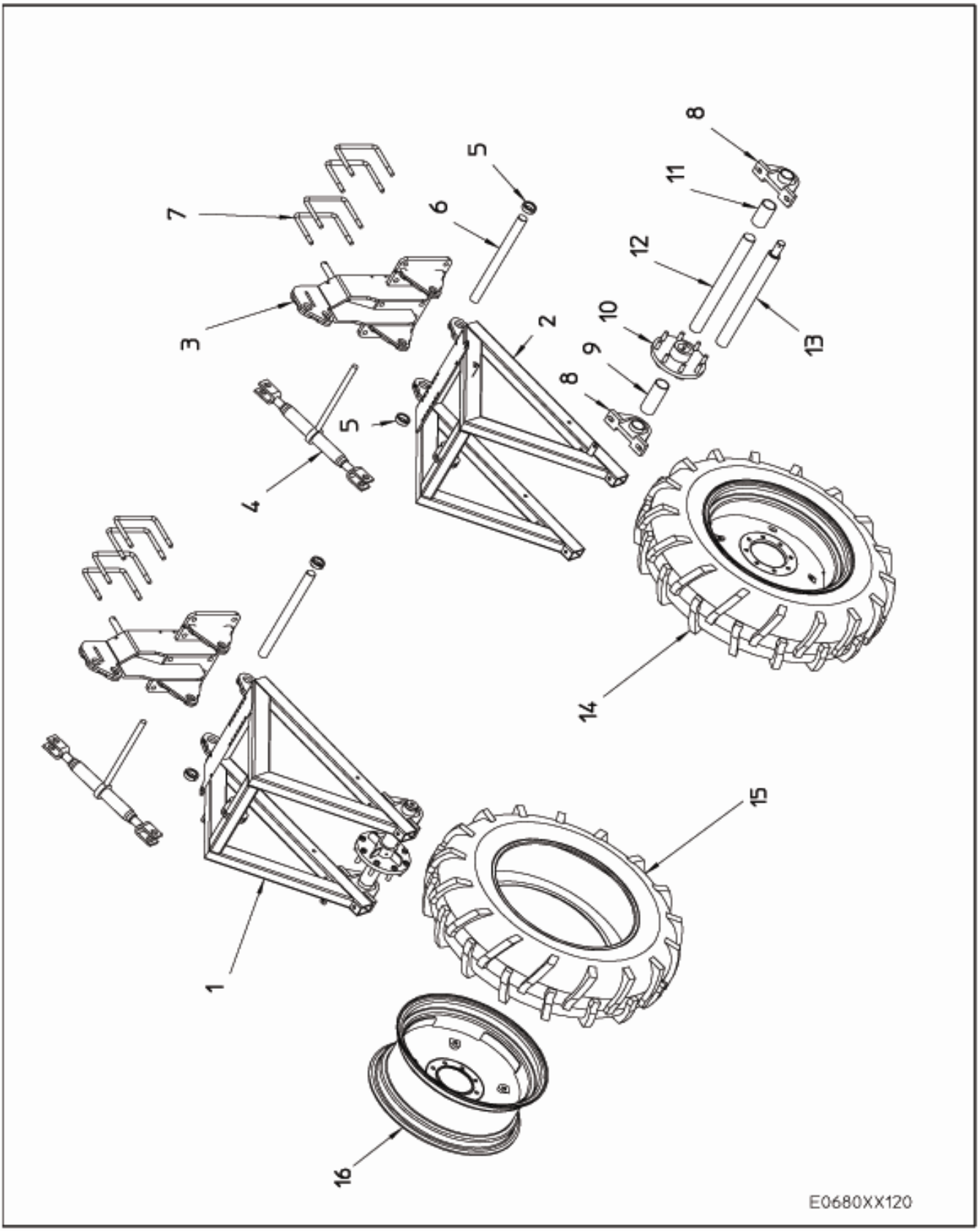
Options

Hydraulic Drive Spudnik Row Unit

Pos.	Quantity	Part #	Description
1	1	601012	MTR,HY,15.5CUIN,1"KEY,4-BOLT,RS-SERIES
2	1	194816	ARM,HYDMDRV,SPUDNIK ROW UNIT
3	1	194818	PLATE,BRACKET HYD DRV,SPUDNIK
4	1	050416	COUPLING,HYDR MOTOR

Options

Depth Wheels



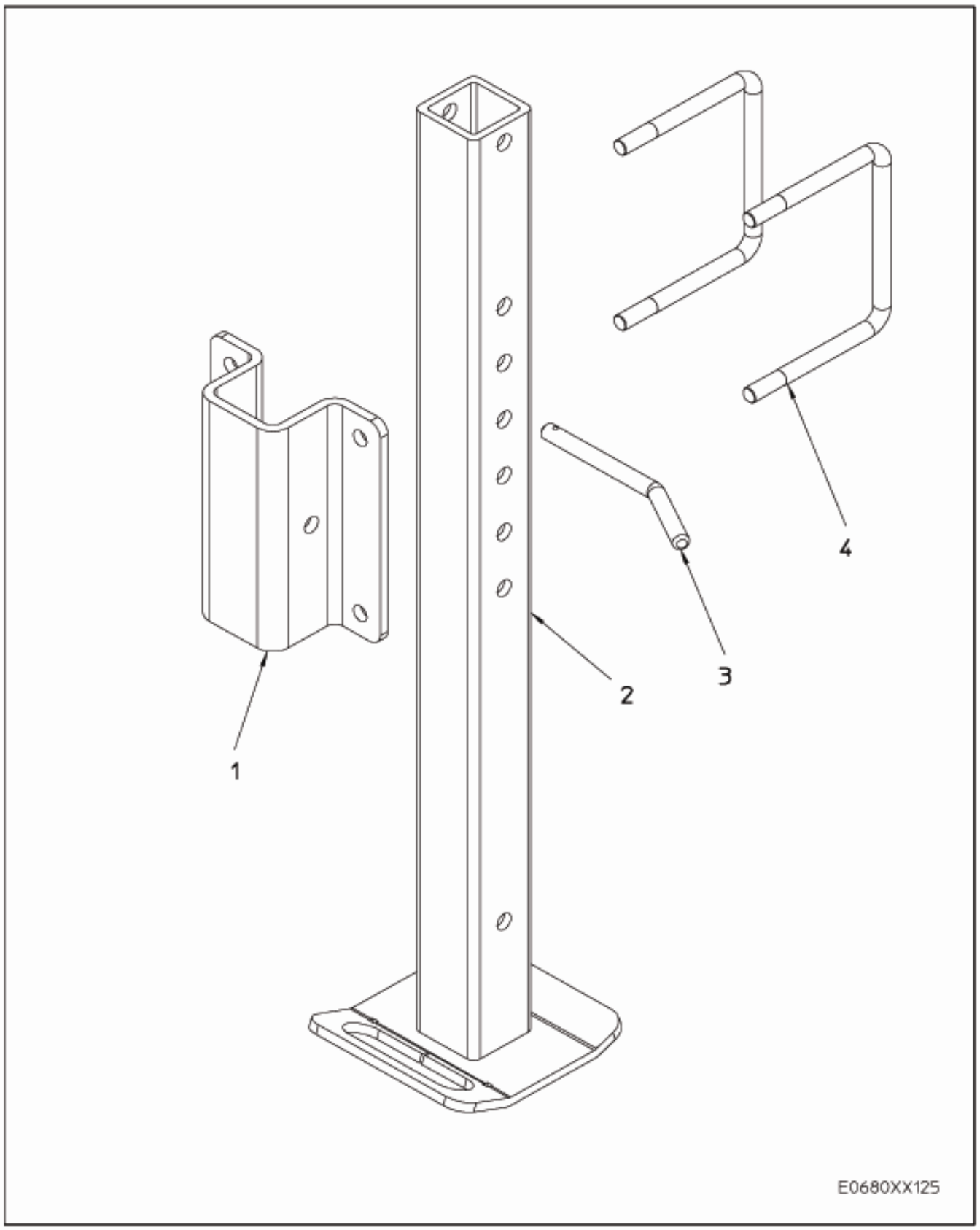
Options

Depth Wheels

Pos.	Quantity	Part #	Despription
1	1	193022	DEPTH,WHEEL,MOUNT,RH,80XX,2006
2	1	193023	DEPTH,WHEEL,MOUNT,LH,80XX,2006
3	2	192596	WHEEL FRAME MOUNT MODEL 80XX-2005
4	2	951284	JACK,RATCHET HEAVY DUTY #SL1541GT
5	4	501952	COLLAR,SHAFT,SET,SCREW,1-1/2"
6	2	181731	SHFT,DUMMY,1-1/2"x19"
7	8	037.03067	U-BOLT M16 GAL [16x518]
8	4	231156	BRNG,PB,2" BORE,ECC LOCK FAFNIR #TAK 2
9	2	173453	TUBE,SPACER,2-3/8"x5-15/16",80XX-05
10	2	951381	HUB ASSY 8 HOLE 2" BORE
11	2	173454	TUBE,SPACER,2-3/8"x4-3/8",80XX-05
12	2	050185	SHAFT,HYD DRIVE,2" 80XX,2005
13	2	050252	SHAFT,MECH,DRIVE,2 IN,80XX,2006
14	2	951387	TIRE AND RIM RH 11.2x24 DRIVE
15		951285	TIRE,11.2-24/8 R1 TUBE TYPE PLANTER
16		951211	RIM,24x10,8HOLE,8"BC,6"PILOT 1.12"OFFSET

Options

Jack Stand



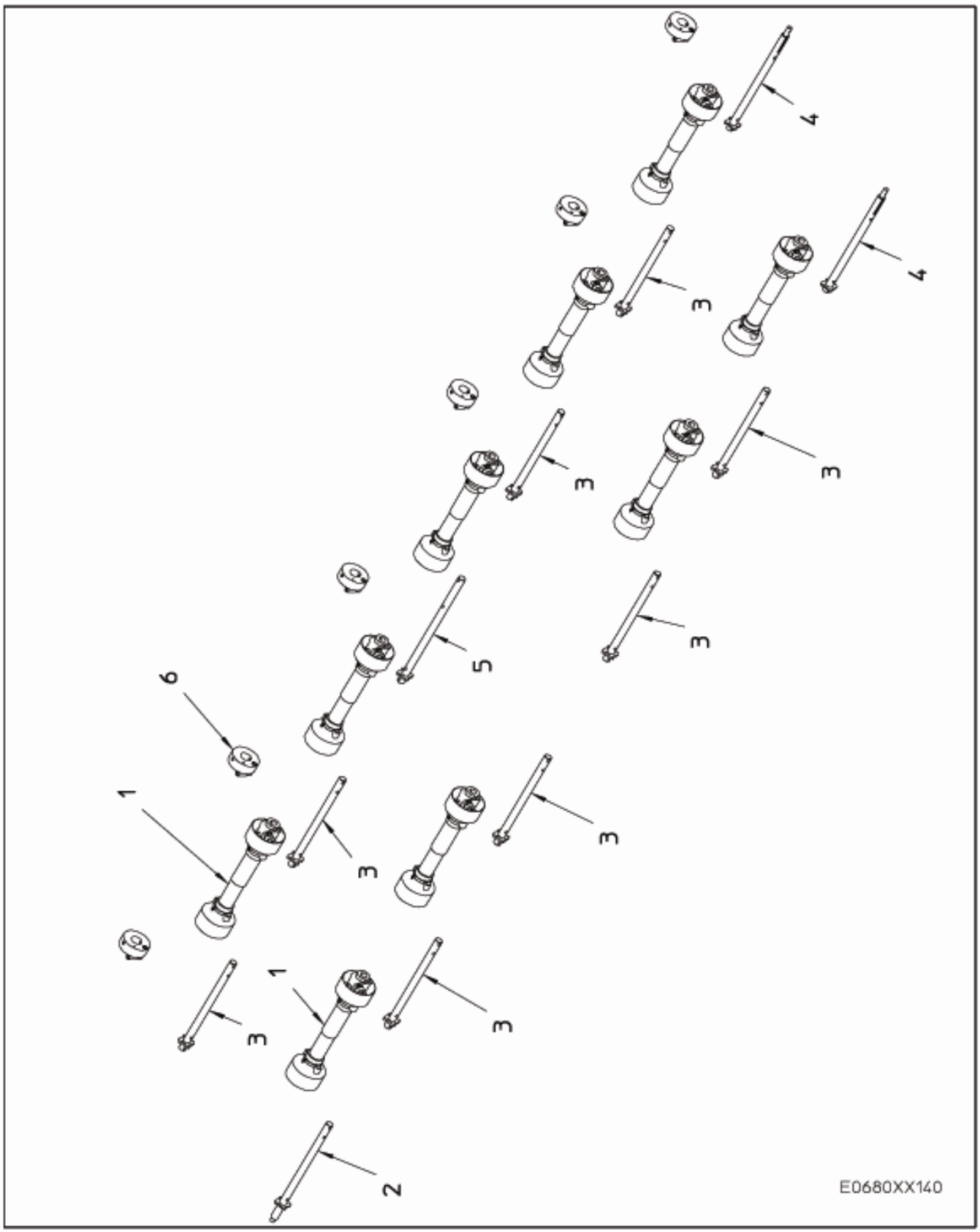
Options

Jack Stand

Pos.	Quantity	Part #	Despription
	2	132497	JACK STAND ASSY MODEL 80XX
1	1	172901	JACK STAND MOUNT MODEL 80XX
2	1	191990	JACK STAND MODEL 80XX
3	1	050014	JACK STAND PIN MODEL 80XX
4	2	037.03067	U-BOLT M16 GAL [16x518]

Options

Row Unit Switch Off Grimme



Options

Row Unit Switch Off Grimme

Hydraulic Drive

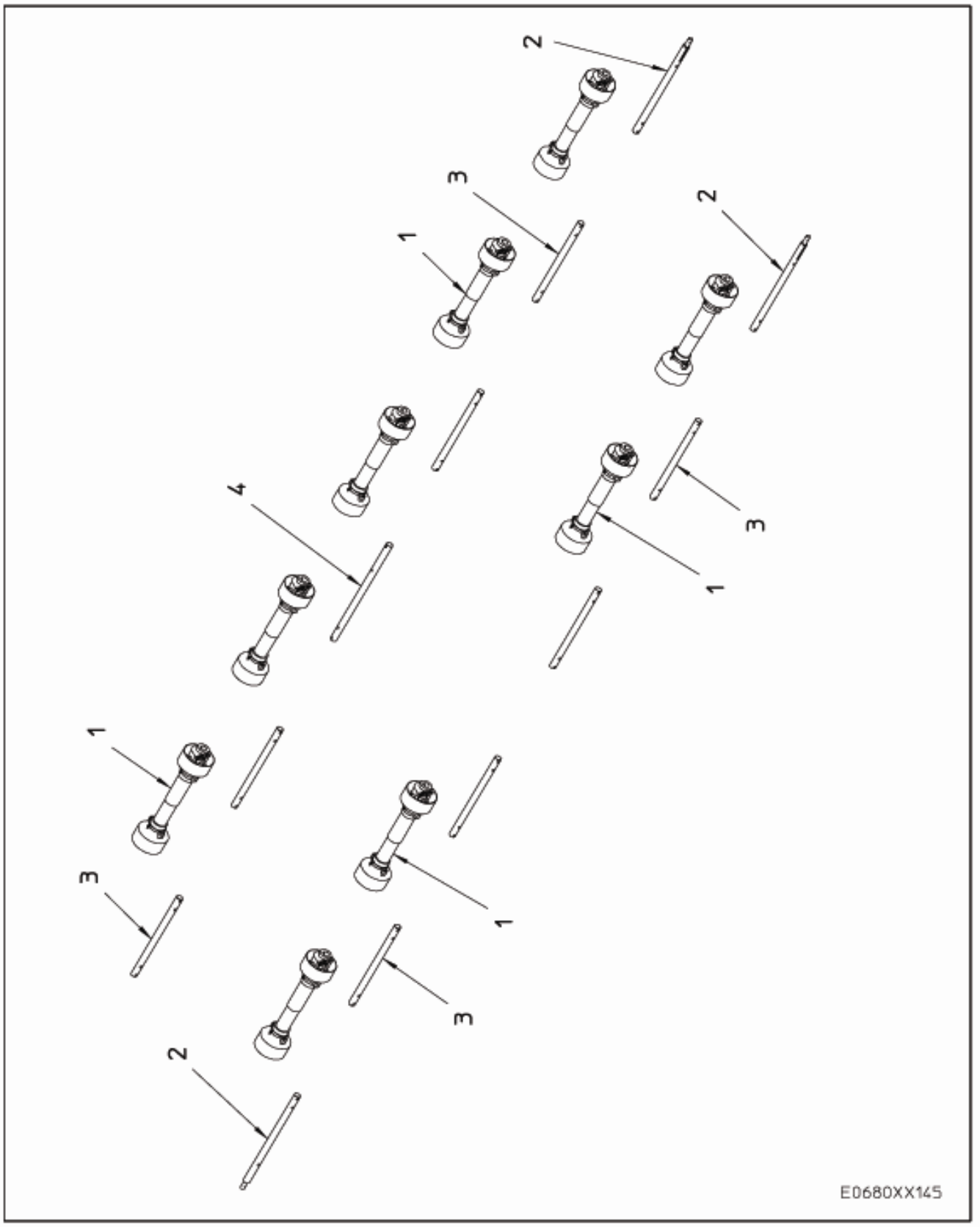
	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	3	5	7	B95.01225	CARDAN SHAFT [x]
2	0	1	1	100.44724	DRIVE SHAFT [x]
3	1	3	5	100.44724	DRIVE SHAFT [x]
4	1	1	1	192586	SHAFT ROW UNIT FIRST ROW 80XX
5	1	1	1	192589	SHAFT ROW UNIT HYD DRV 80XX
6	4	6	8	200.72721	MANUAL DISCONNECT CLUTCH

Mechanical Drive

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	3	4	6	B95.01225	CARDAN SHAFT [x]
2	0	1	1	100.44724	DRIVE SHAFT [x]
3	2	4	6	100.44724	DRIVE SHAFT [x]
4	1	1	1	192586	SHAFT ROW UNIT FIRST ROW 80XX
5	0	0	0	192589	SHAFT ROW UNIT HYD DRV 80XX
6	4	6	8	200.72721	MANUAL DISCONNECT CLUTCH

Options

No Row Unit Switch Off Grimme



Options

No Row Unit Switch Off Grimme

Hydraulic Drive

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	3	5	7	B95.01225	CARDAN SHAFT [x]
2	1	1	1	050095	SHAFT
3	2	4	6	050184	SHAFT,DRIVE,ROWUNIT,80XX,2006
4	1	1	1	050097	SHAFT

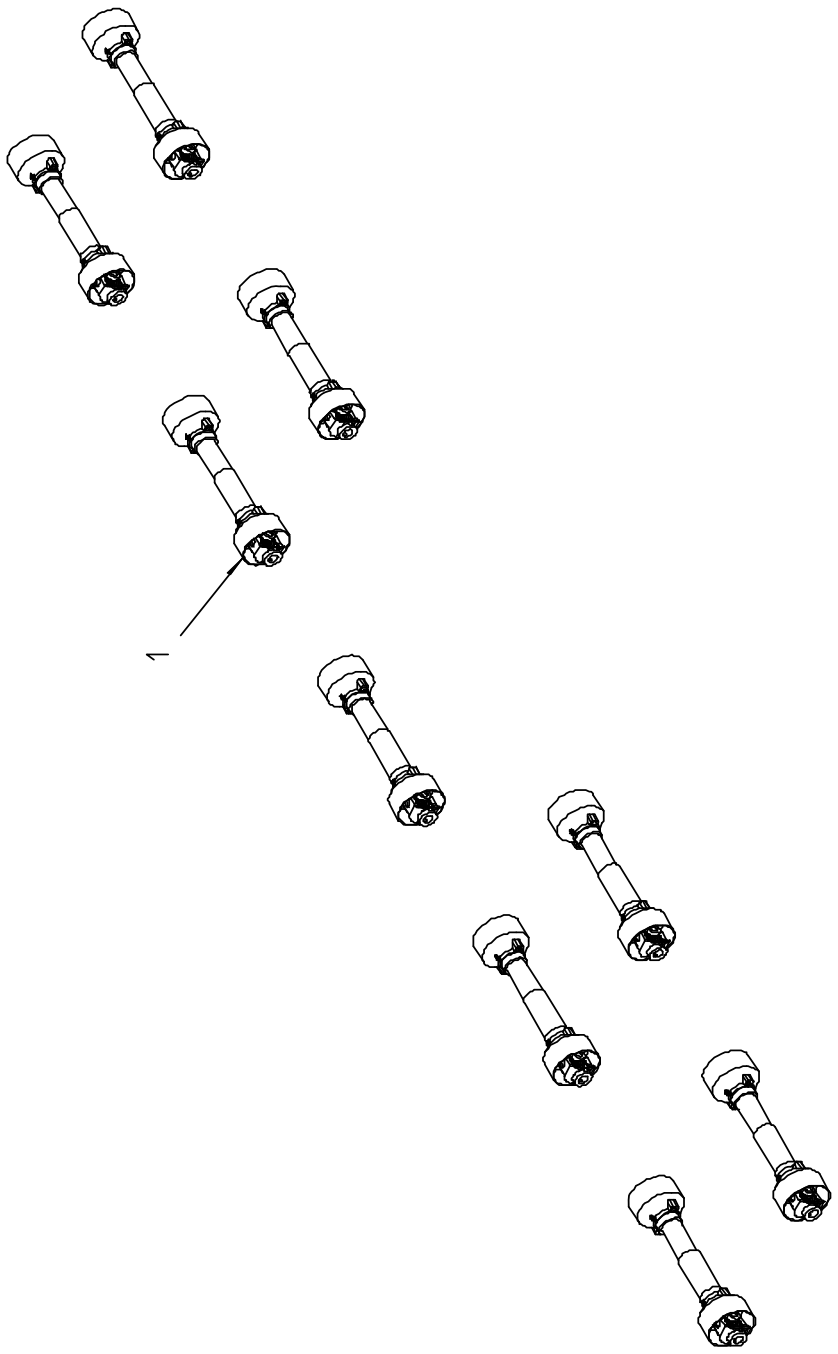
Mechanical Drive

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	3	4	6	B95.01225	CARDAN SHAFT [x]
2	1	2	2	050095	SHAFT
3	3	4	6	050184	SHAFT,DRIVE,ROWUNIT,80XX,2006
4	0	0	0	050097	SHAFT

Options

No Row Unit Switch Off Spudnik Row Unit

E0880XX030



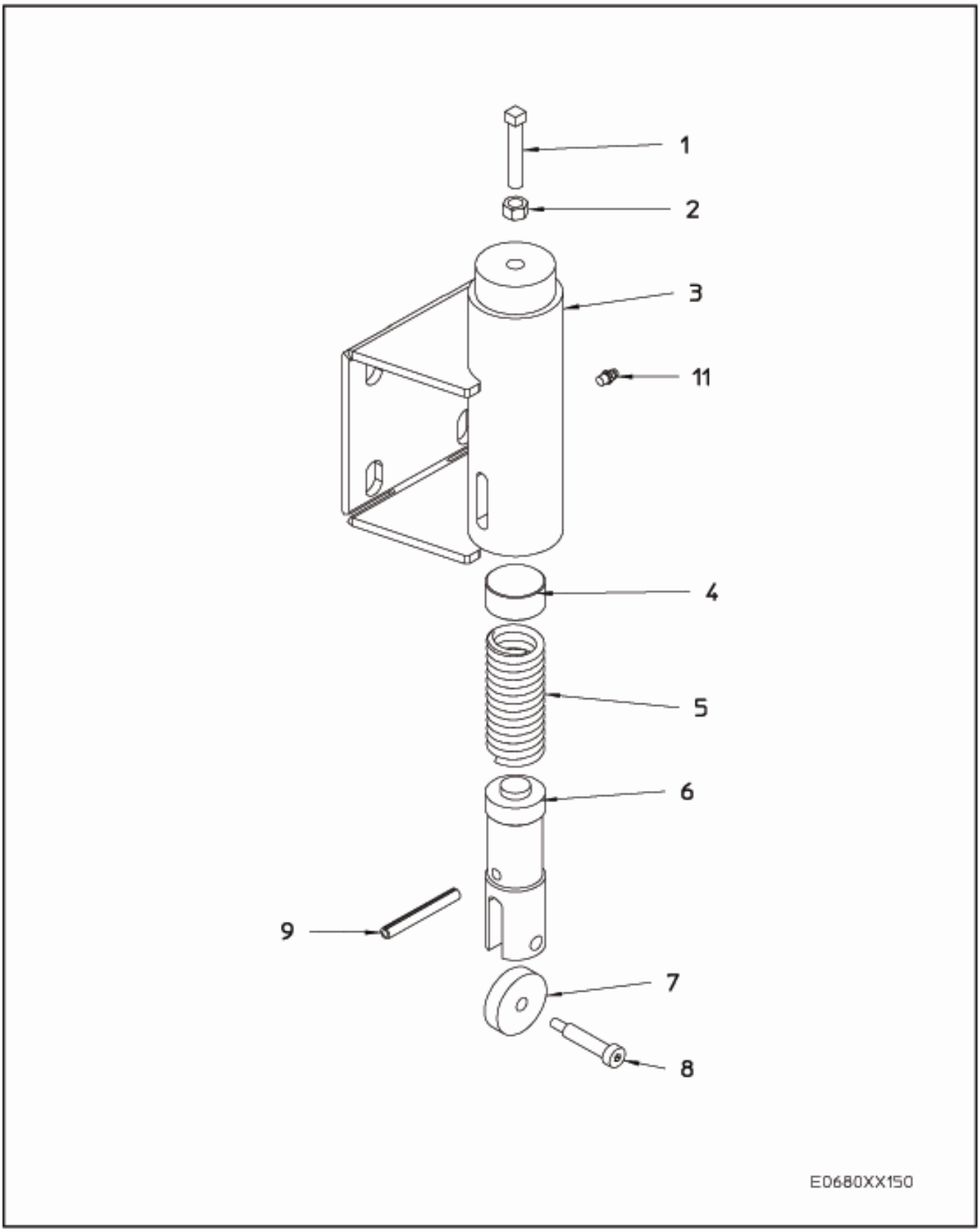
Options

No Row Unit Switch Off Spudnik Row Unit

Pos.	Quantity						Part #	Description
	hydraulik drive			mechanical drive				
	8040	8060	8080	8040	8060	8080		
1	3	5	7	3	4	6	B95.01225	CARDAN SHAFT

Attachments

4-Wheel Caster Locks



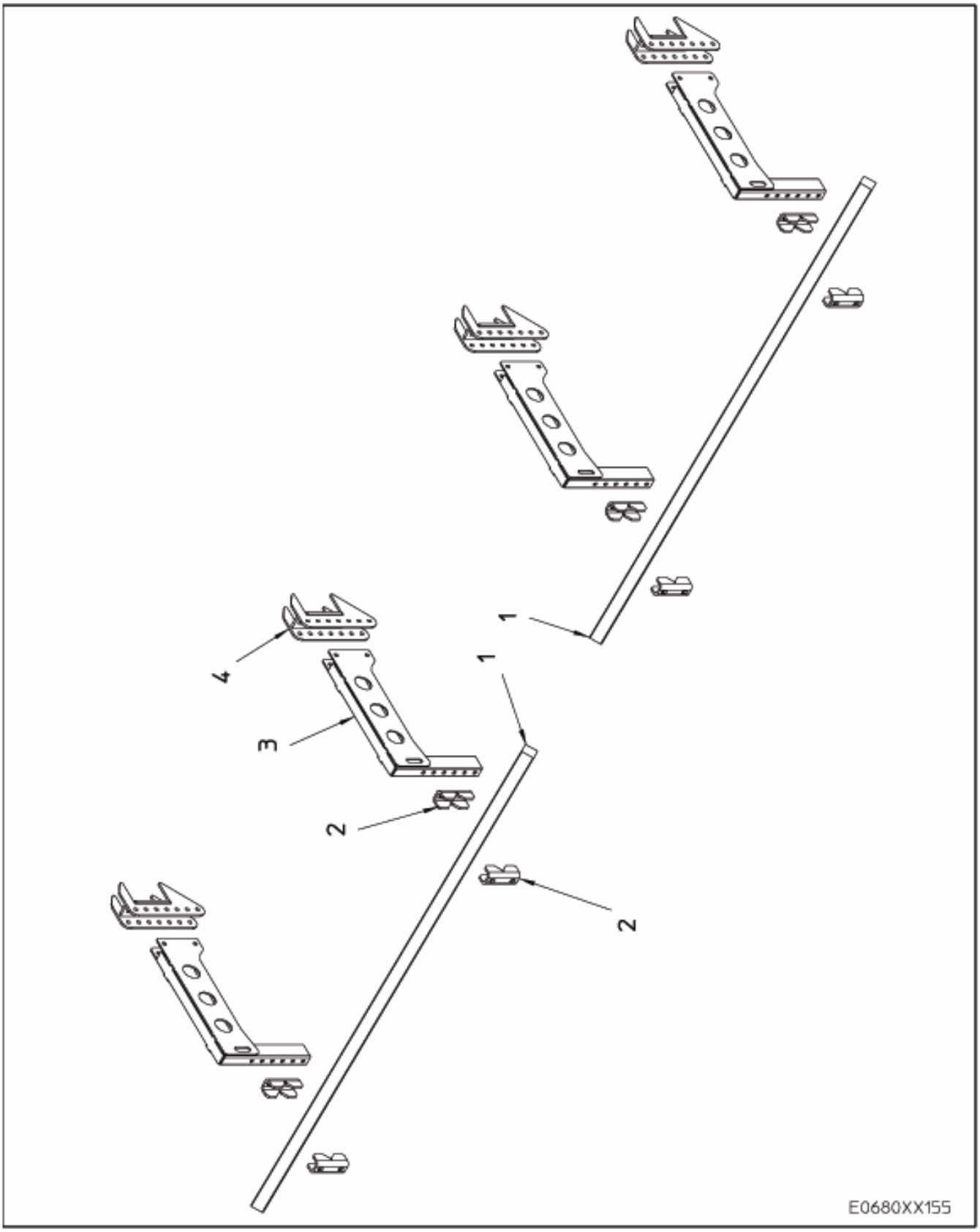
Attachments

4-Wheel Caster Locks

Pos.	Quantity	Part #	Despription
		132405	ASSY,WHEEL LOCK,2004
1	1	502473	SCREW,SET,SQR,HD,3/8-16 x 2"
2	1	501809	NUT,HEX,3/8"-16UNC
3	1	132404	WHEEL LOCK HOUSING,2004
4	1	181716	ROLLER,PLUNGER STOP,WHEEL LOCK, PLANTER
5	1	981446	SPRING,COMPRESSION,1-1/4"OD x 4"LONG
6	1	181722	PLUNGER,WHEEL LOCK PLANTER
7	1	181882	DISK,WHEEL,LOCK PLUNGER
8	1	502601	BOLT,SHOULDER,SOCKET HEAD,3/8" X 1-1/2"
9	1	502438	PIN,ROLL,5/16" x 2-1/2" LONG
11	1	501991	FITTING,GREASE,1/4"-28UNF STRAIGHT 641B

Attachments

Front Toolbar



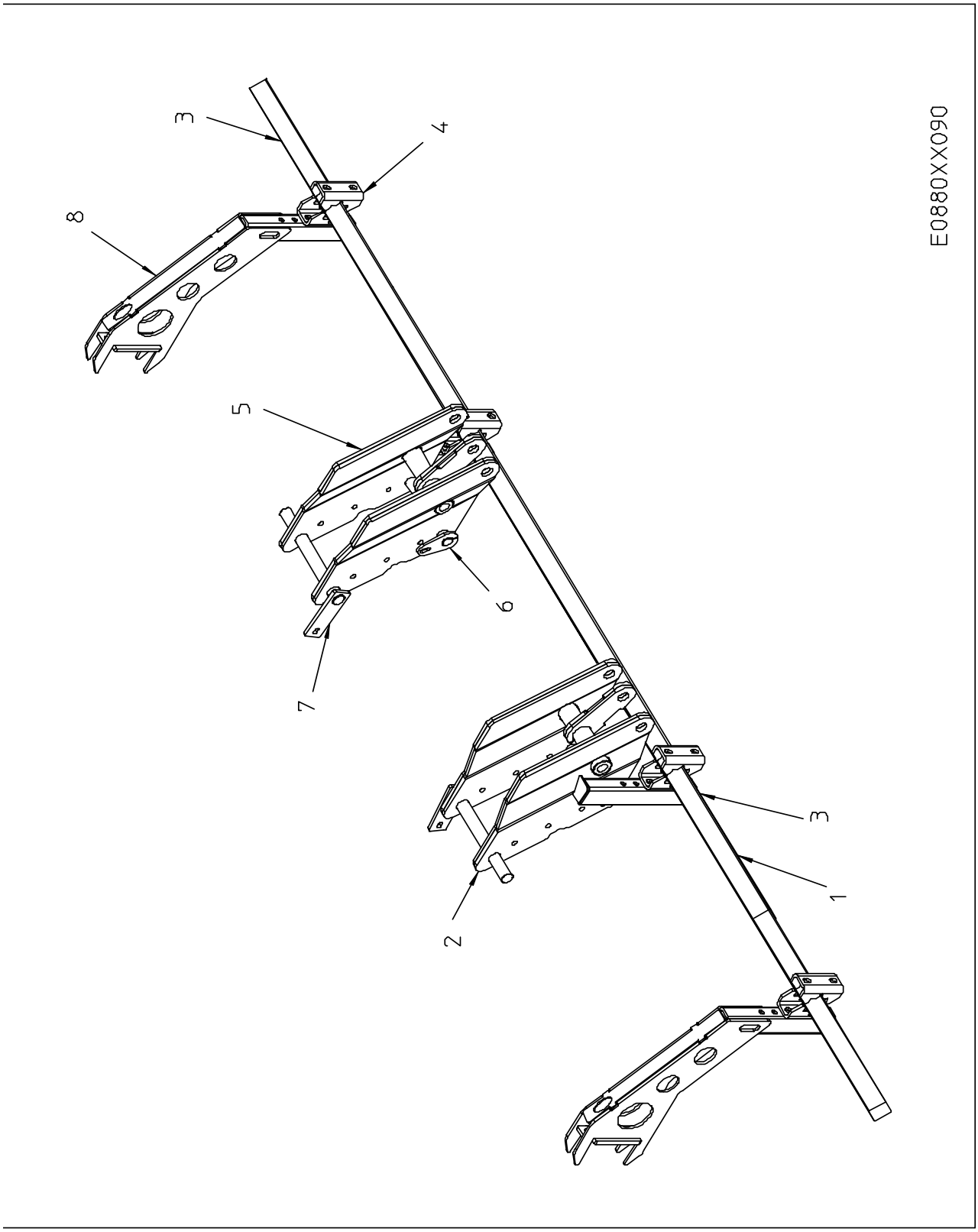
Attachments

Front Toolbar

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	0	0	2	174289	BAR SOLID
1	0	2	0	174275	BAR SOLID
1	2	0	0	174287	BAR SOLID
2	8	8	8	174292	CLAMP,DIAMOND HITCH,TOOL BAR #107225
3	4	4	4	192673	TOOLBAR ARM
4	4	4	4	192674	BRACKET

Attachments

Toolbar Front Semi-Mount



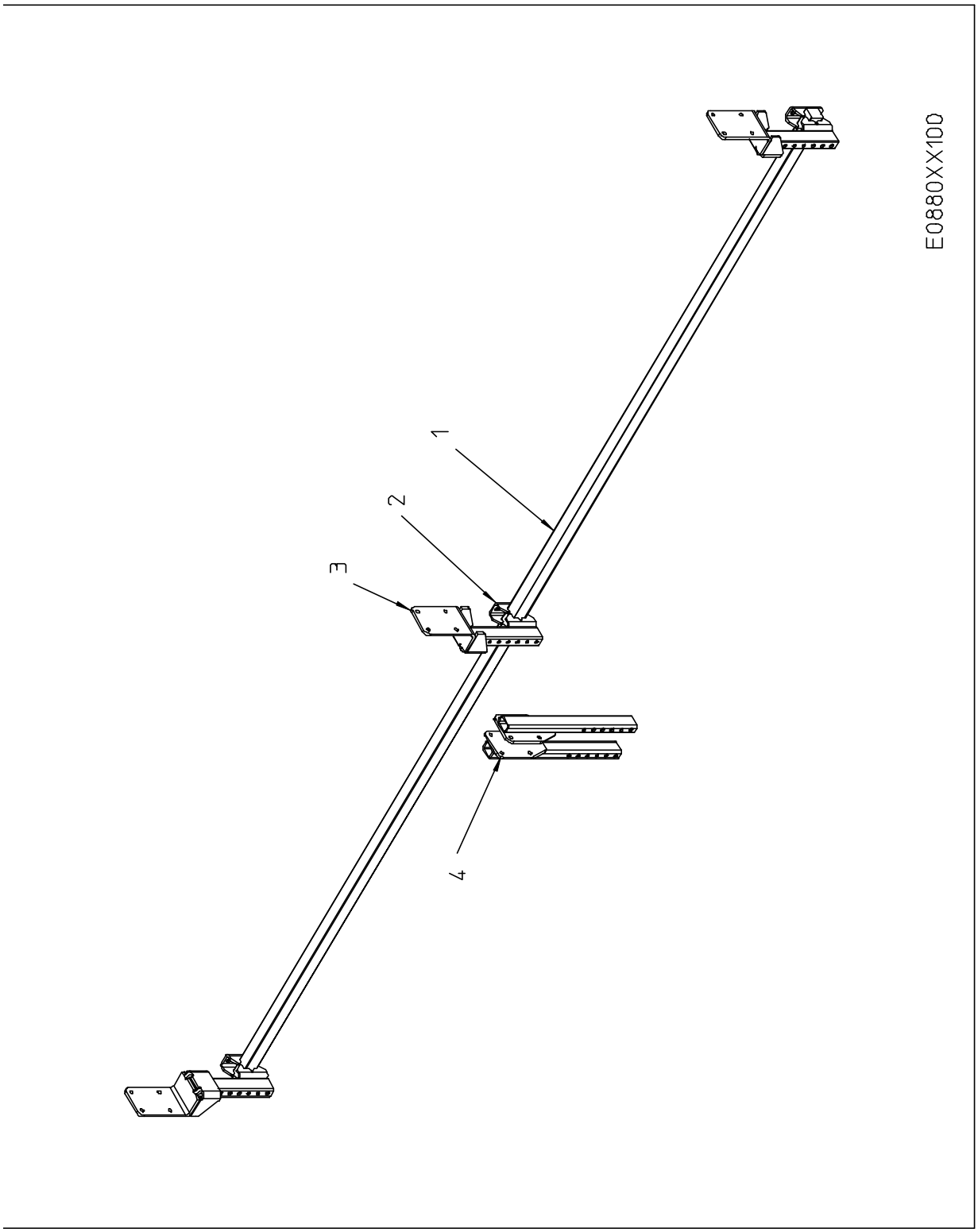
Attachments

Toolbar Front Semi-Mount

Pos.	Quantity		Part #	Description
	8040	8060 / 8080		
1	1	0	174289	TOOLBAR,FRONT,2-1/2"x113"PLANTER
2	1	1	193346	EXTENSION,HITCH,RH,80XX,2006
3	0	1	174288	TOOLBAR,FRONT,2-1/2"x185-7/8"
4	8	8	174292	CLAMP,TOOLBAR
5	1	1	193347	EXTENSION,HITCH,LH
6	2	2	193349	PIN,1-7/16" x 12" LONG
7	2	2	193110	PIN,1-5/8"OD,15-3/8"LNG
8	0	2	193348	ARM,TOOLBAR,FRONT

Attachments

Toolbar Rear



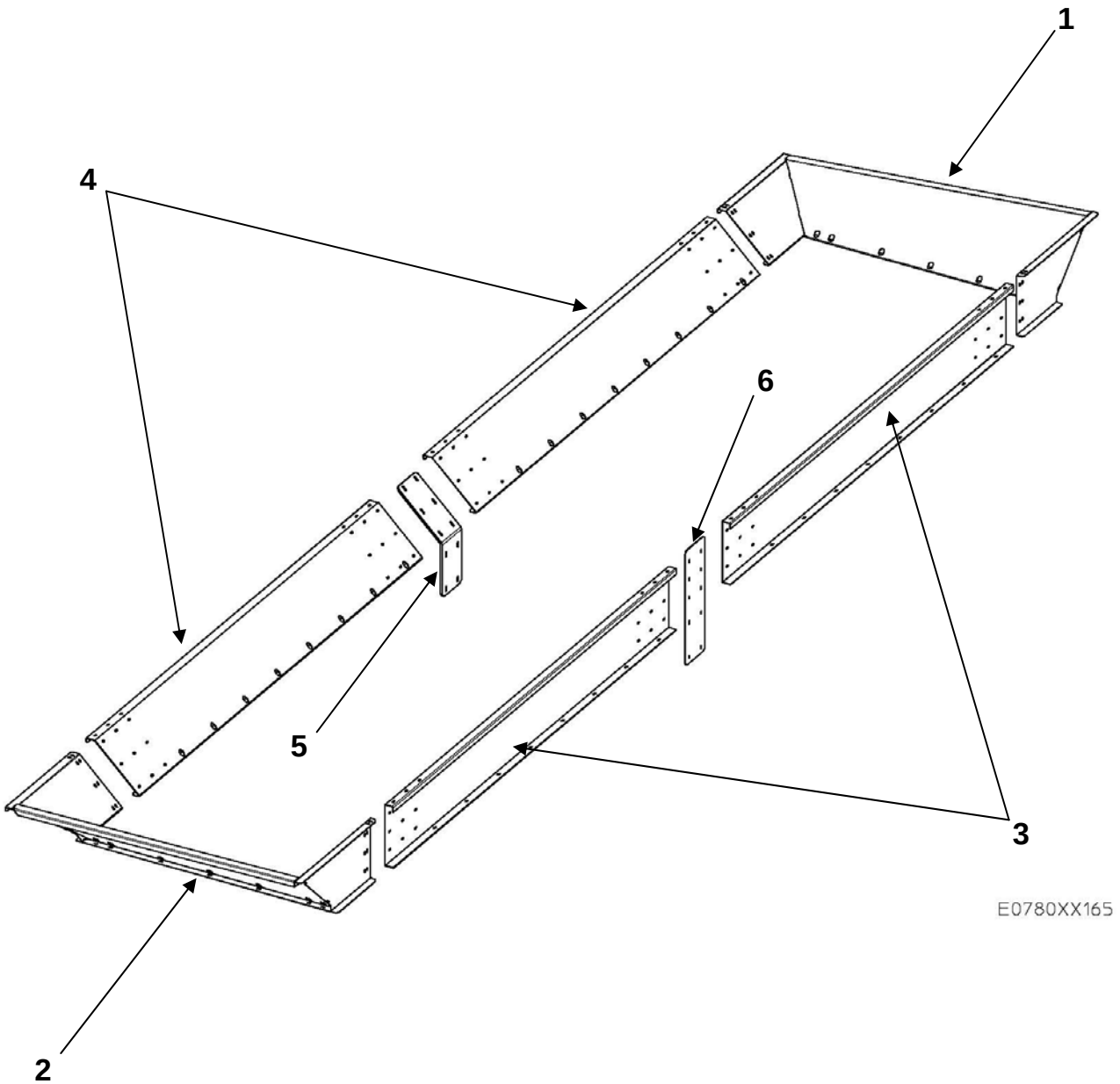
Attachments

Toolbar Rear

Pos.	Part#	Quantity			Description
		8040	8060	8080	
1	174295	1	0	0	TOOLBAR,REAR,2-1/2"x171-1/16"
1	174276	0	1	0	TOOLBAR,REAR2-1/2"x245-7/8"
1	174290	0	0	1	TOOLBAR,REAR,2-1/2"x158-7/16"
2	174292	6	6	8	CLAMP,TOOLBAR
3	192359	3	3	2	TOOL BAR BRACKET REAR
4	194343	0	0	2	BRACKET CENTER

Attachments

Hopper Extension



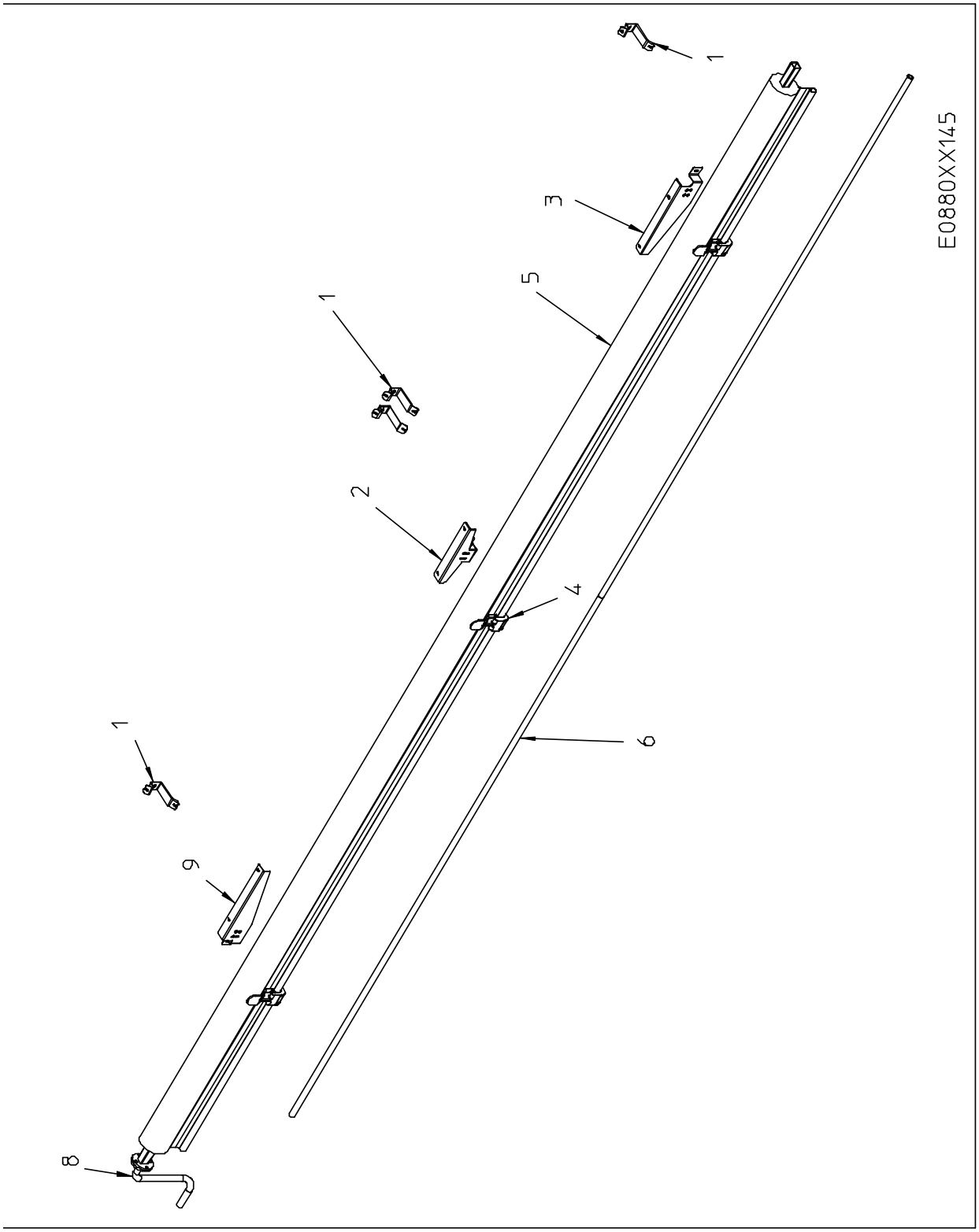
Attachments

Hopper Extension

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	1	1	1	194197	EXTENSION PANEL LEFT END 80XX
2	1	1	1	194198	EXTENSION PANEL RIGHT END 80XX
3	2	0	0	173928	EXT PANEL FRONT MDL 8040
3	0	2	0	173920	EXT PANEL FRONT MDL 8060
3	0	0	2	194201	EXT PANEL FRONT MDL 8080
4	2	0	0	173929	EXT PANEL REAR MDL 8040
4	0	2	0	173922	EXT PANEL REAR MDL 8060
4	0	0	2	194202	EXT PANEL REAR MDL 8080
5	1	1	1	173921	CENTER SUPPORT REAR MDL 80XX
6	1	1	1	173288	CENTER SUPPORT FRONT MDL 80XX

Attachments

Hopper Tarp



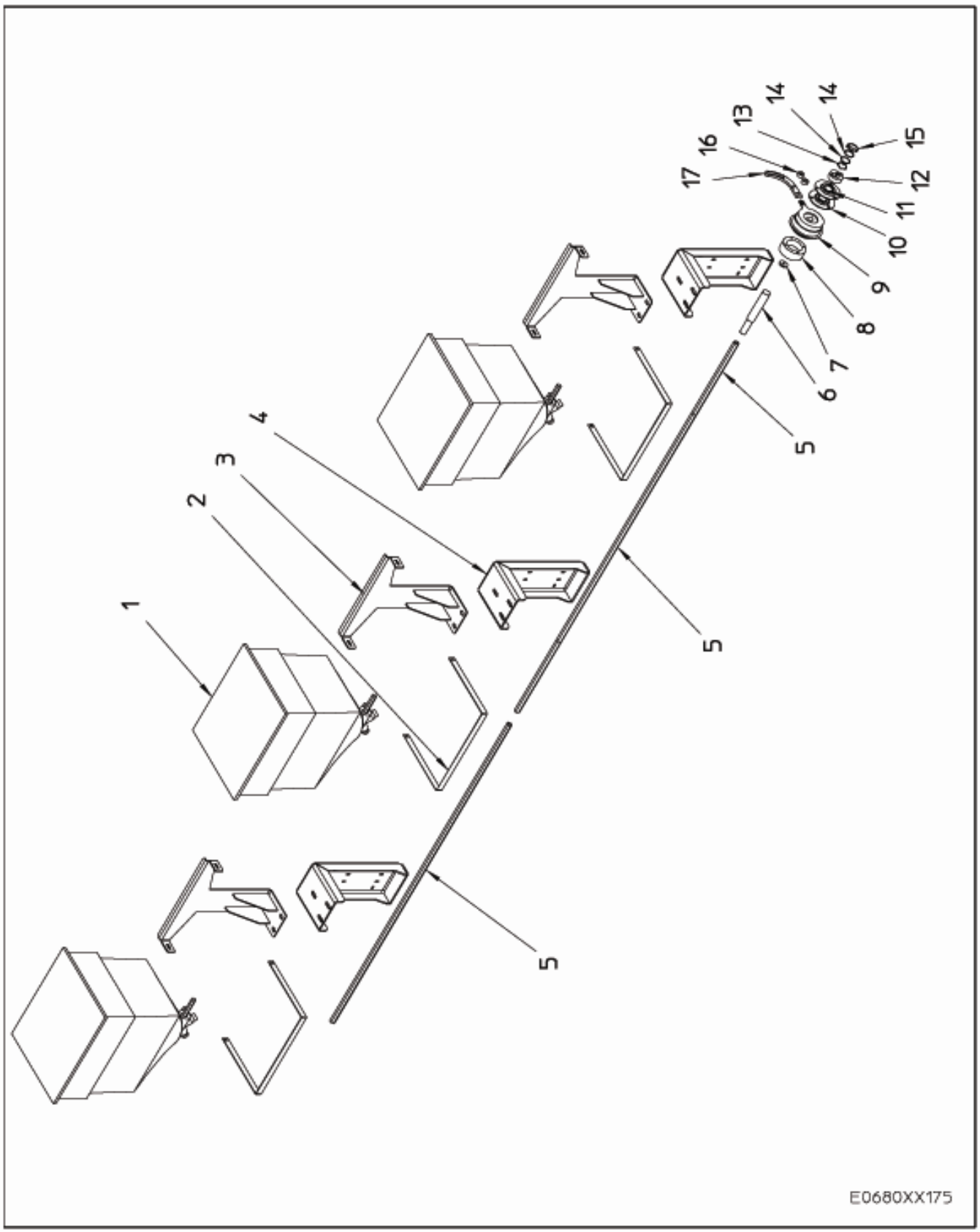
Attachments

Hopper Tarp

Pos.	Quantity	part #						Description
		8040	**8040 With Ex**	**8060**	**8060 With Ex**	**8080**	**8080** With Ex	
1	4	174039						BracketRrear
2	1	192650						Mount Center
3	1	173290						Mount LH
4	3	981379						Clip Holder
5	1	**981491**	**981869**	**981490**	**981871**	**981637**	**981873**	Tarp Red
6	**1**	**080054**	**080165**	**131980**	**194453**	**080053**	**194452**	Tarp Holder
8	**1**	**192676**	**194423**	**131969**	**194472** **194424**	**192675**	**194425**	Handle
9	1	173289						Mount RH

Attachments

Chemical Boxes



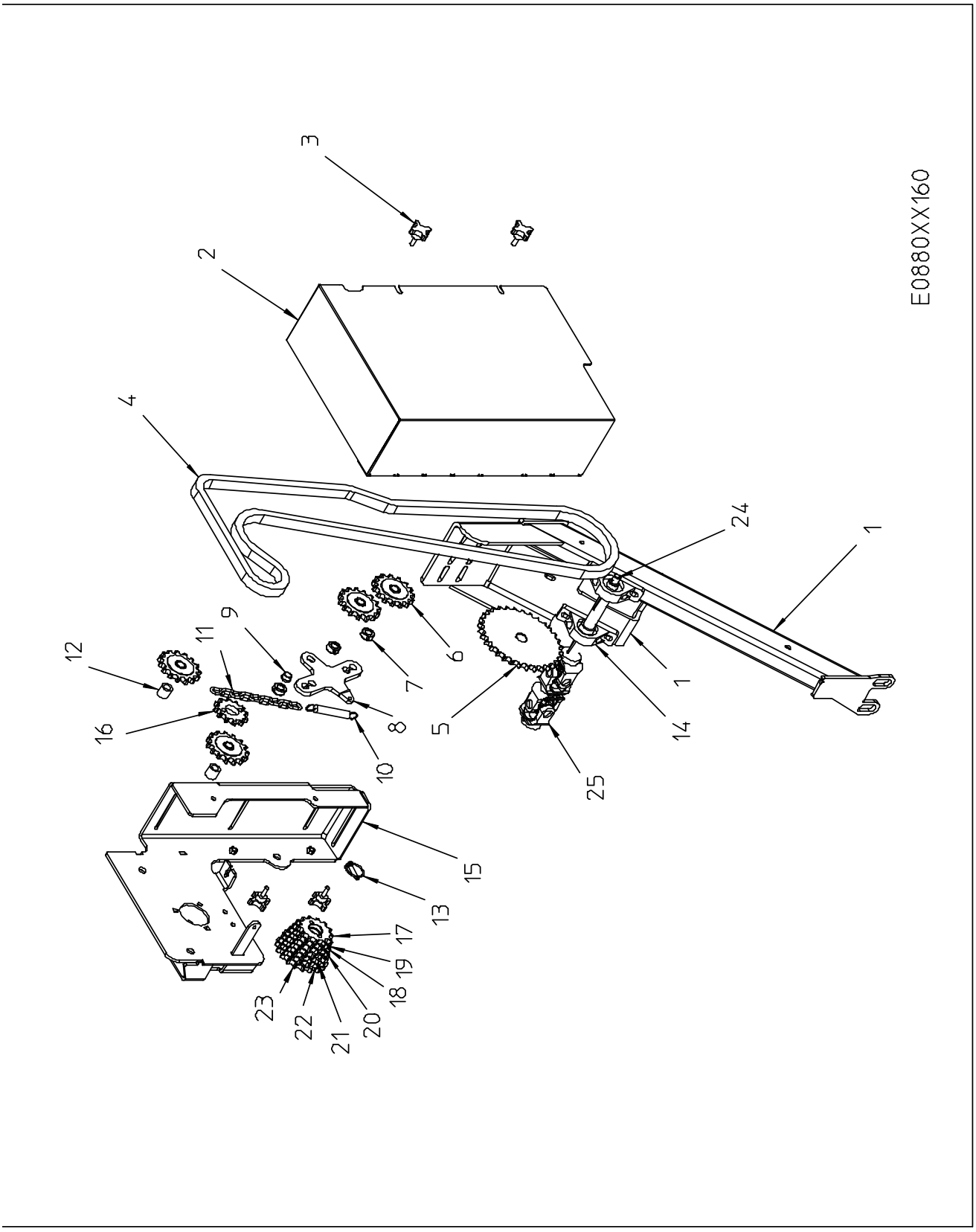
Attachments

Chemical Boxes

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	2	3	4	981461	ASSY,HOPPER 2-DROP W/15MM RTRS MICROBAND
2	2	3	4	172396	CLAMP MICROBAND MODEL 8060
3	2	3	4	192656	BRACKET BOX SUPPORT MICROBAND 8060
4	2	3	4	192687	PLATE
5	2	3	4	172664	HEX,TUBE MICROBAND DRIVE SHAFT X 6'
6	1	1	1	821718	SHFT,DK,1-1/4"x9-5/16"(2.875-1.25)D3/8"
7	1	1	1	172167	PLATE, MICROBAND DRIVE WASHER
8	1	1	1	181790	CLUTCH,MOUNT PLANTER CHEM BOX DRIVE
9	1	1	1	781351	CLUTCH,12VDC ELEC. WARNER GT I-5215-121
10	4	4	4	231171	HOUSING,BRNG,3HOLE,62MM,FLANGETTE PLATED
11	2	2	2	231071	BRNG,INSERT,1-1/4" BORE SPHR OD VS-120S
12	1	1	1	132177	ASSY,SEED SPACING SPROCKET HUB
13	1	1	1	502445	WASHER,WAVY,1.62 SSR-0162
14	2	2	2	981457	SHIM,1.625"OD x .150"WALL x .024"THICK
15	1	1	1	502446	PIN,LINCH,5/16"OD x 1-9/16"LG W/RING
16	2	2	2	172170	SPACER,TUBE CLUTCH LINKAGE
17	1	1	1	172169	PLATE,SLOTTED CLUTCH LINKAGE

Attachments

Chemical Box Drives



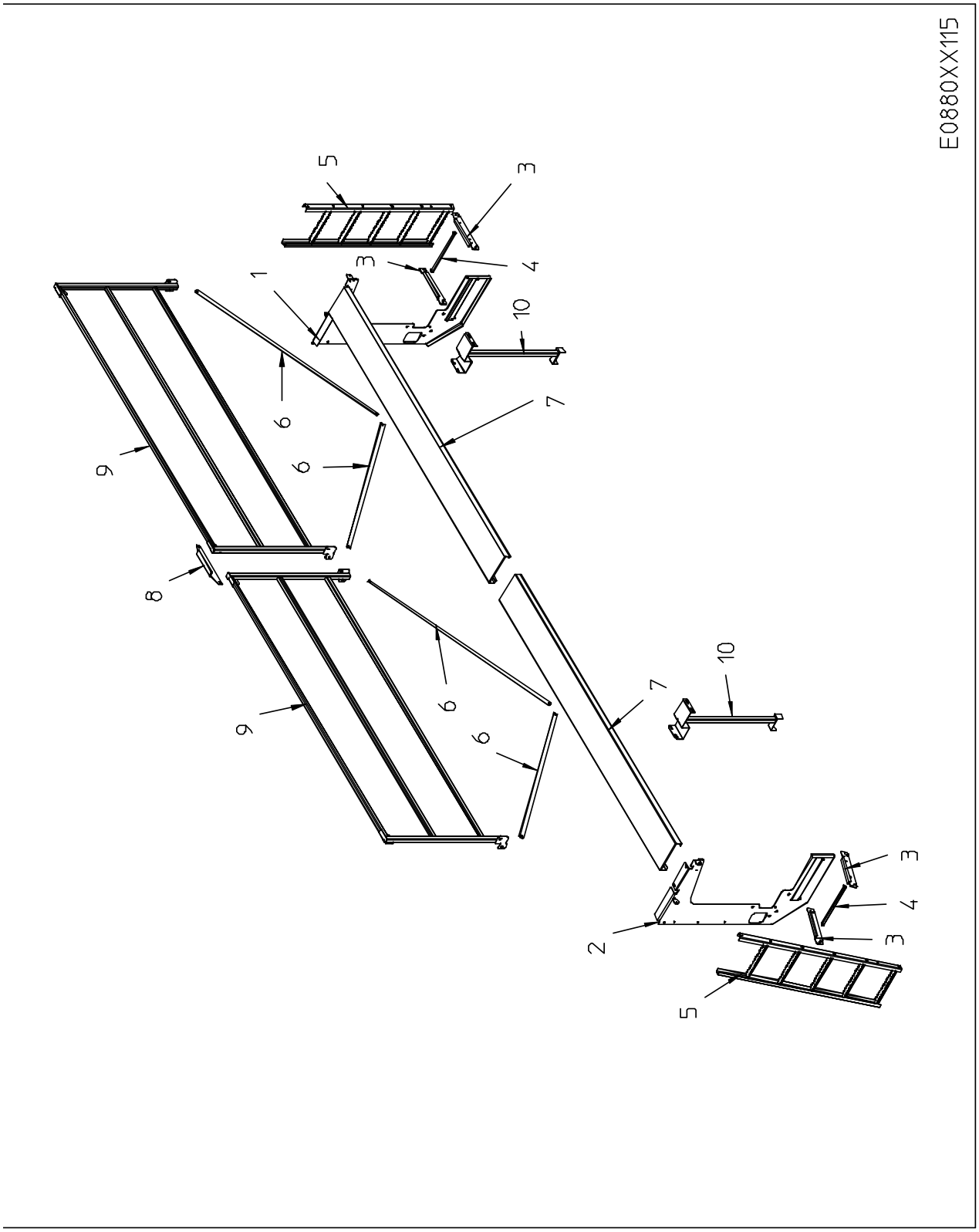
Attachments

Chemical Box Drives

Pos.	Quantity	Part #	Despription
1	1	194017	BRACKET,MECH DRIVE LH,80XX,2007
2	1	193334	SHIELD,CHEM DRIVE 80XX,2006
3	4	981250	KNOB,CLAMPING,W/STUD 3/8"-16x1" 5993K41
4	1	352409	CHN,RLR,60
5	1	881327	SPRCKT,H60BS36 x 1“ BORE
6	4	881079	IDLER,60,PITCH,5/8" BORE 15 TOOTH #709
7	3	501900	COLLAR,SHAFT,SET,SCREW,5/8"
8	1	172064	PLATE IDLER ADJUSTER
9	1	231180	BRNG,BRONZE,FLNGD,5/8"IDx5/8"LG 6338K425
10	1	981456	SPRING,EXTENSION,3/4" x.085" WIREx5"LNG
11	1	G00003	CHN,LINK,3/16,9LNK
12	2	172206	SPACER,TUBE IDLER MECHANICAL DRIVE
13	1	502446	PIN,LINCH,5/16"OD x 1-9/16"LG W/RING
14	1	231061	BRNG,PB,1" BORE SAS
15	1	193335	FRAME,CHEM DRIVE,80XX-2006
16	1	881287	SPRCKT,60A12x1-1/4" BORE 2003 MDL
17	1	881288	SPRCKT,60A13x1-1/4" BORE 2003 MDL
18	1	881289	SPRCKT,60A14x1-1/4" BORE 2003 MDL
19	1	881290	SPRCKT,60A15x1-1/4" BORE 2003 MDL
20	1	881291	SPRCKT,60A16x1-1/4" BORE 2003 MDL
21	1	881292	SPRCKT,60A17x1-1/4" BORE 2003 MDL
22	1	881293	SPRCKT,60A18x1-1/4" BORE 2003 MDL
23	1	881294	SPRCKT,60A19x1-1/4" BORE 2003 MDL
24	1	050324	SHAFT,MECH DRIVE 80XX,2007
25	1	B95.01207	CARDAN SHAFT 220mm

Attachments

Catwalk



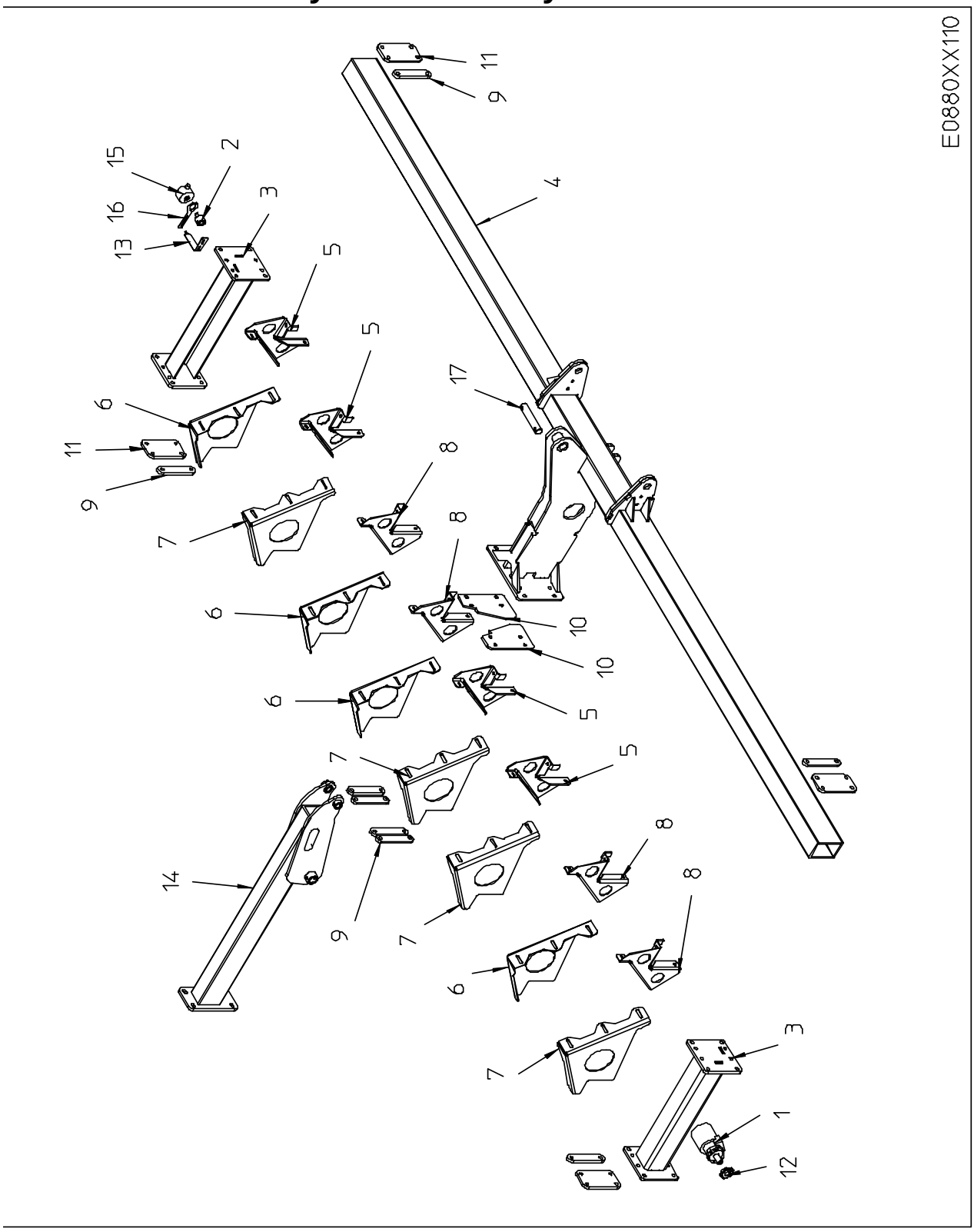
Attachments

Catwalk

	8040	8060	8080		
Pos.	Quantity			Part #	Despription
1	1	1	1	194849	CATWALK,PLATE,LEFT
2	1	1	1	194850	CATWALK,PLATE,RIGHT
3	4	4	2	192671	RAILING MODEL 8080
4	2	2	2	174294	LOCKING,LINKAGE,CROSSBAR
5	2	2	2	194848	RAILS,STEPS
6	0	4	0	173230	CATWALK STRUT 8060 FLAT 1/4x1-1/4
7	2	0	0	173278	GRIP STRUT 11-3/4x2 84-1/2" LONG
7	0	2	0	172661	GRIP STRUT 11-3/4x2 (10FT LONG)
7	0	0	4	173310	GRIP STRUT 11-3/4x2 77" LONG
8	1	1	1	173231	RAILING CONNECTOR MODEL 80XX
9	2	0	0	192629	RAILING,CATWALK 8040
9	0	2	0	192578	RAILING,CATWALK 8060
9	0	0	2	192671	RAILING MODEL 8080
10	0	0	2	192669	CATWALK SUPPORT MODEL 8080

Attachments

Dry Fertilizer Assy SS



Attachments

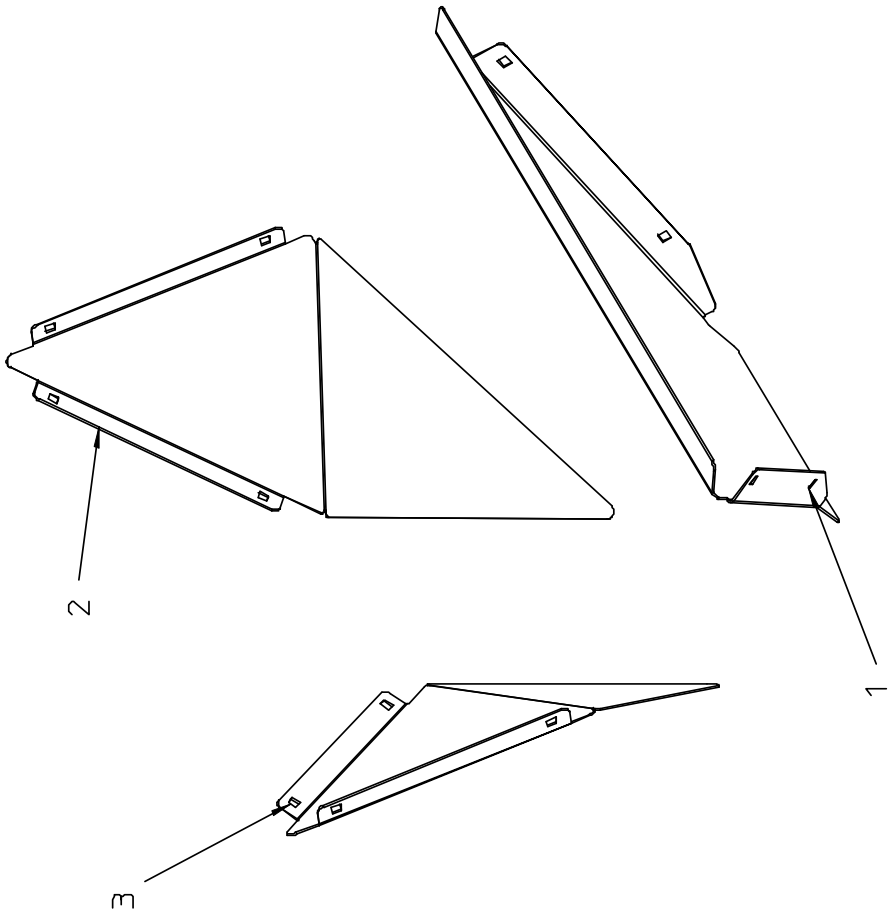
Dry Fertilizer Assy SS

Pos.	Quantity		Part #		Description
	8040	8060	8040	8060	
1	1		602096		MTR,HY,9.9CUIN,1-1/4"KEY,SAE-A
2	1		174115		ADAPTER,FERT BOX DRIVE
3	2		194469		BAR,WELDMENT
4	1		194483	194470	FRAME,FERT
5	3	4	174301		PLATE,8060,FERT
6	3	4	194895		PLATE,8060,FERT
7	3	4	194894		PLATE,8060,FERT
8	3	4	174302		PLATE,8060,FERT
9	8		174037		PLATE
10	2		174038		PLATE
11	4		173807		DEPTH WHEEL MNT PLATE,80XX,2007
12	1		881345		SPROCKET,H50BS14x1-1/4" (5/16"KEYWAY)
13	1		173262		BRACKET HYD DRIVE MODEL 80XX
14	1		194471		BRACKET,8060,FERT
15	1		B94.04155		SENSOR,ENCODER,10241/U,M12X1
16	1		173455		ARM,ENCODER,LONG
17	1		050427		TEMPLATE,SHAFT SAW

Attachment

Grimme Row Unit Insert

E0880XX0135



Attachment

Grimme Row Unit Insert

Pos.	Quantity	Part #	Description
1	1	174298	SHEET,BACK PLATE SPUDNIK,KIT,PLANTER
2	1	174299	SHEET,L.H. SPUDNIK KIT,PLANTER
3	1	174300	SHEET,R.H. SPUDNIK KIT PLANTER

4

Attachments

Dual Camera

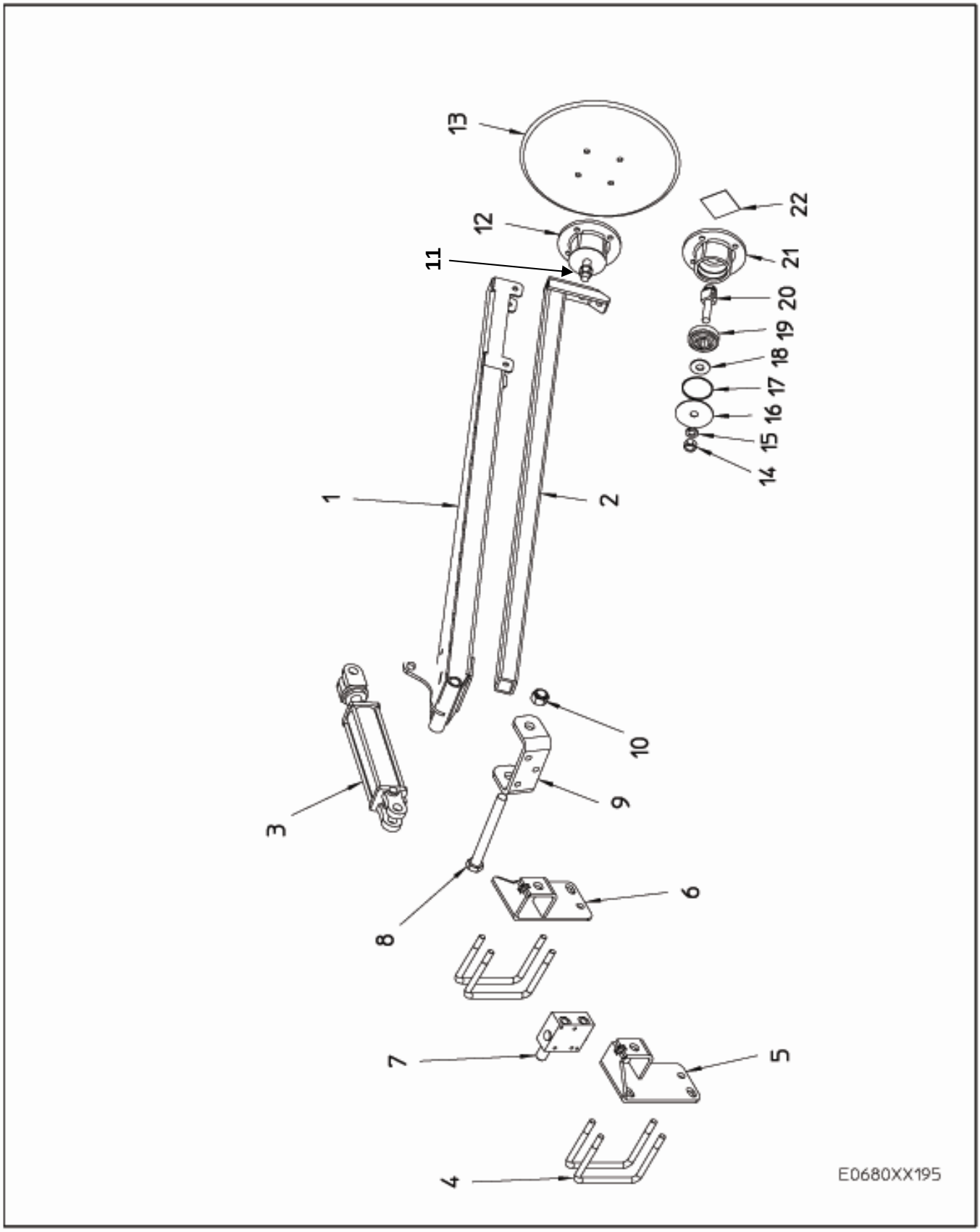
Attachments

Dual Camera

Pos.	Quantity	Part #	Despription
1	2	450218	CAMERA AUDIOVOX, 25' CABLE
2	1	450259	CAMERA,AUDIOVOX,MONITOR W/CNNCTRS.
3	2	450261	CAMERA,AUDIOVOX-VCCS130B
4	1	450258	CAMERA, SYSTEM AUDIOVOX-VCCS130B

Attachments

Marker Arms



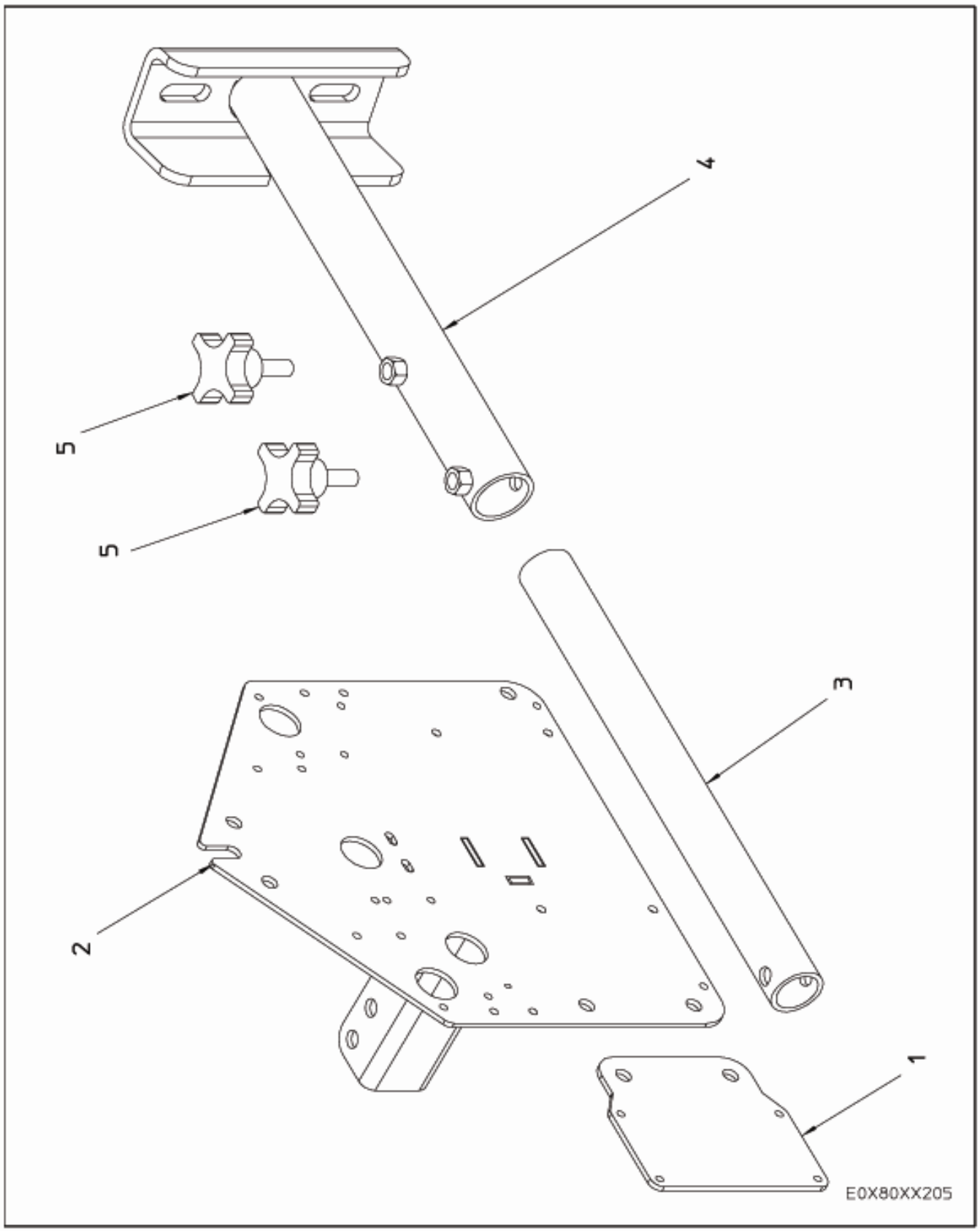
Attachments

Marker Arms

Pos.	Quantity	Part #		Despription
		8040	**8060/8080**	
1	2	194855	194852	MARKER,ARM,RECEIVER
2	2	192662	193133	MARKER,ARM,EXT
3	1	602613		CYLNDR,TIE,ROD,2"x10" SAE 20-1/4"
4	4	037.03067		U-BOLT M16 GAL [16x518]
5	1	193065		MARKER,ARM CYLINDER MOUNT,80XX,2006
6	1	193066		MARKER,ARM CYLINDER MOUNT,80XX,2006
7	1	B92.04279		CHANGE-OVER VALVE EAK 701 B [x]
8	1	501357		BOLT,HEX,HD,1"-8UNC x 10" GR 5
9	1	173469		MARKER ARM PIVOT 80XX,2006
10	1	501713		NUT,LOCK,HEX,1"-8UNC NYLON INSERT
11	1	181714		SPACER,1.75"ODx.812"IDx1/4"LG, DISC HUB
12	1	951295		HUB,COMPLETE,4 HOLE HILLING DISC
13	1	210098		COULTER,16"x1-1/2"CONCAVE,4.5MM,4HOLE
14	1	501815		NUT,HEX,3/4"-10UNC
15	1	501936		WASHER,LOCK,SPLIT,3/4"
16	1	171955		WASHER,12GA,COVERING DISC HUB
17	1	502417		RING,SNAP,INTER 3-3/8"OD SMALLEY WHT-315
18	1	501908		WASHER,FLAT,3/4" USS ZINC PLT (9/LB)
19	1	231162		BRNG,INSERT,1-1/8"SQ BORE FLT OD
20	1	171925		BOLT, COULTER SUB-WELD PLANTER
21	1	321601		HUB,4-BOLT HILLING DISC MACHINED CAST
22	1	172299		UHMW,TAPE,ADHESIVE,CAP,COVERING DISC HUB

Attachments

Bracket Mount Terminal



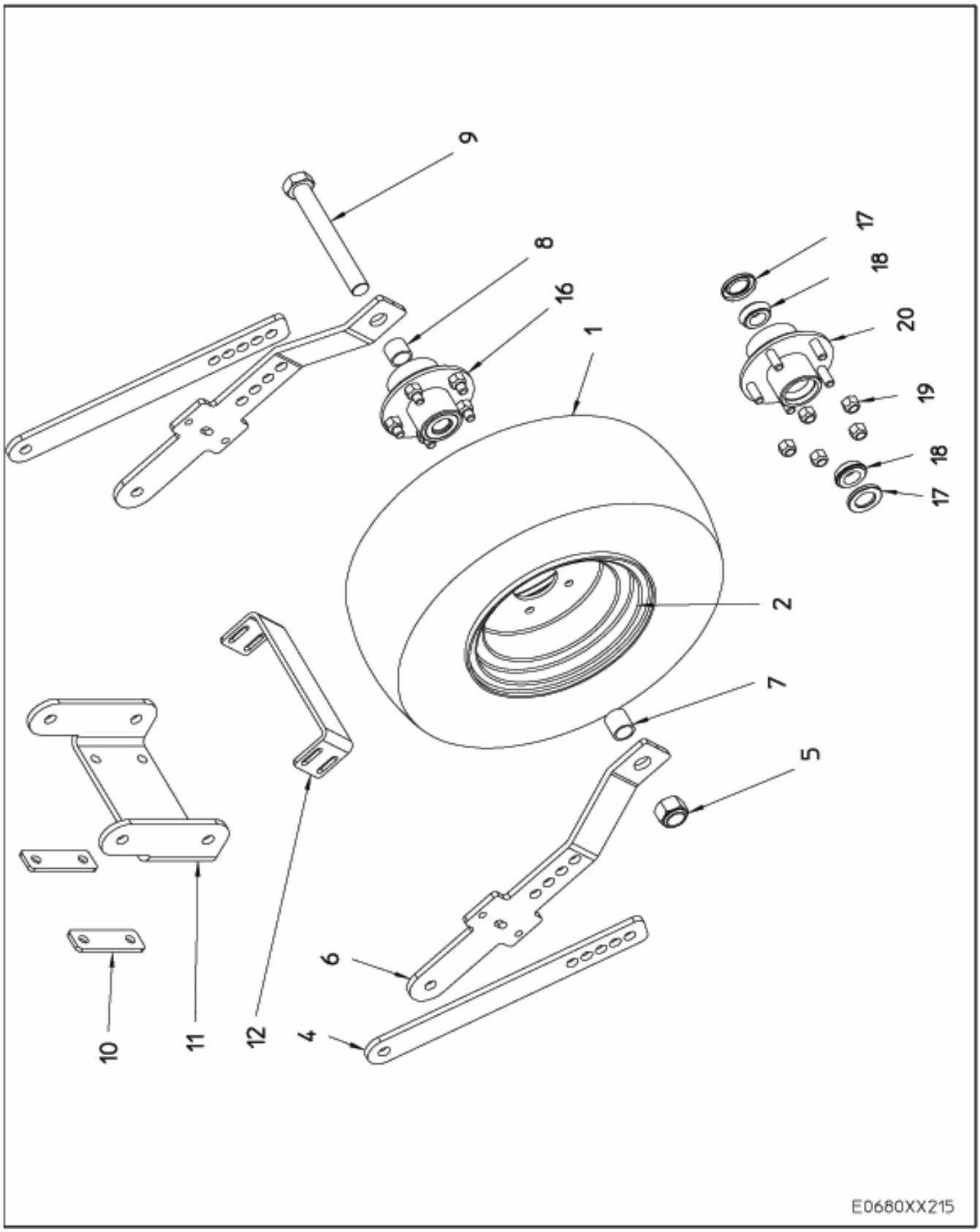
Attachments

Bracket Mount Terminal

Pos.	Quantity	Part #	Despription
1	1	173313	PLATE,CONTROL W-DRV 6400-2005
2	1	192678	MOUNT,CONTROL PANEL 6400-2005
3	1	173314	TUBE,MOUNT,PANEL 6400-2005
4	1	192677	ARM,MOUNT,PANEL 6400-2005
5	2	981250	KNOB,CLAMPING,W/STUD 3/8"-16x1" 5993K41

Attachments

Small Depth Wheels



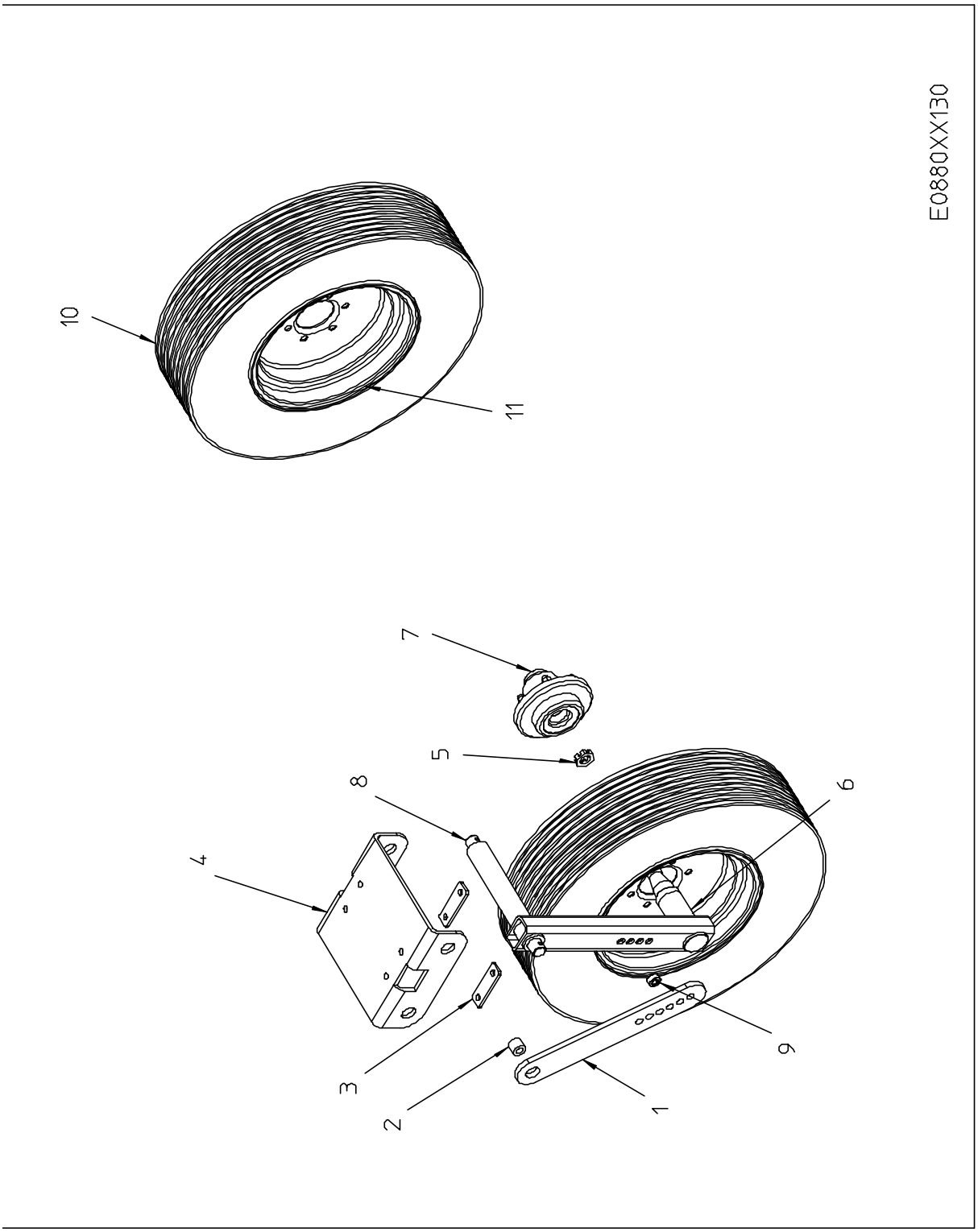
Attachments

Small Depth Wheels

Pos.	Quantity	Part #	Despription
1	1	951261	TIRE,20.5/8.0-10/10 LOW PROFILE W/STEM
2	1	951260	RIM,10"x8-10,5 HOLE 4.5" BC
4	2	173459	GAGE,WHEEL,DPTH,AJST,80XX,2006
5	1	501713	NUT,LOCK,HEX,1"-8UNC NYLON INSERT
6	2	173457	GAGE,WHEEL,ARM,80XX,2006
7	1	171857	SPACER,PIPE,1-1/4" LG. 8" & 12" CRZY WH
8	1	171856	SPACER,PIPE,1"LG. 8" & 12" CRAZY WHEEL
9	1	501198	BOLT,HEX,HD,1"-8UNC x 8" GR 5
10	2	173461	BRACKET,GAGE,WHEEL,80XX,2006
11	1	173458	GAGE,WHEEL,BRKT,80XX,2006
12	1	173460	SCAPER,GAGE,WHEEL,80XX,2006
16	1	951398	HUB,ONLY,5 HOLE W/STUDS THRU BOLT
17	2	951026	SEAL,GREASE, #34823
18	2	231000	BRNG,WHEEL,2/HUB #44643
19	5	951116	NUT,LUG,TAPERED, 1/2"-20UNF, RIGHT HAND
20	1	951397	HUB,5-HOLE,2.5BORE

Attachments

Tall Depth Wheels



Attachments

Tall Depth Wheels

Pos.	Quantity	Part #	Description
1	1	173983	PLATE,ADJUSTER,80XX
2	1	090240	TUBE,ADAPTER,TALL GAGE WHEEL
3	2	173461	BRACKET,GAGE,WHEEL
4	1	173984	BRCKT,GAGE WHL,TALL
5	1	951098	NUT,SLOTTED,HEX,1"-14NF JAM 1/2"
6	1	194390	ARM,GAGE WHEEL,TALL
7	1	951037	HUB,COMPLETE,6 HOLE
8	1	050409	PIN,GAGE WHEEL,TALL
9	1	501900	COLLAR,SHAFT,SET,SCREW,5/8"
10	2	951441	TIRE,225/75-R15
11	2	951442	RIM,15x6,6 HOLE,5.5BS,3.625PT,0.5 OFFSET

Notes:

MACHINE: PLANTER80XX-2008-REV-A

Order:

Contents:

1	Coversheet
2	2 & 3 Wheel Caster
3	4 Wheel Caster & Marker arm
4	4 Wheel Walking Beam & STRBL Axle 804X
5	STR Walking Beam 80XX & Hyd Shaker LCCP
6	Drive Feed Chain (Hopper Group)
7	Drive Row Unit
8	Drive Shaker
9	DRY FERTILIZER / FILL AUGER
10	OVERVIEW ELECTRIC
11	6 ROW PROF. CONTROL CABLE HARNESS
12	6 ROW PROF. CONTROL CABLE HARNESS
13	8 ROW PROF. CONTROL EXT. HARNESS
14	6 ROW LOW COST HARNESS
15	6 ROW LOW COST HARNESS
16	8 ROW LOW COST EXT. HARNESS
17	W-HARNESS-SENSOR/VALVE EXTENSIONS

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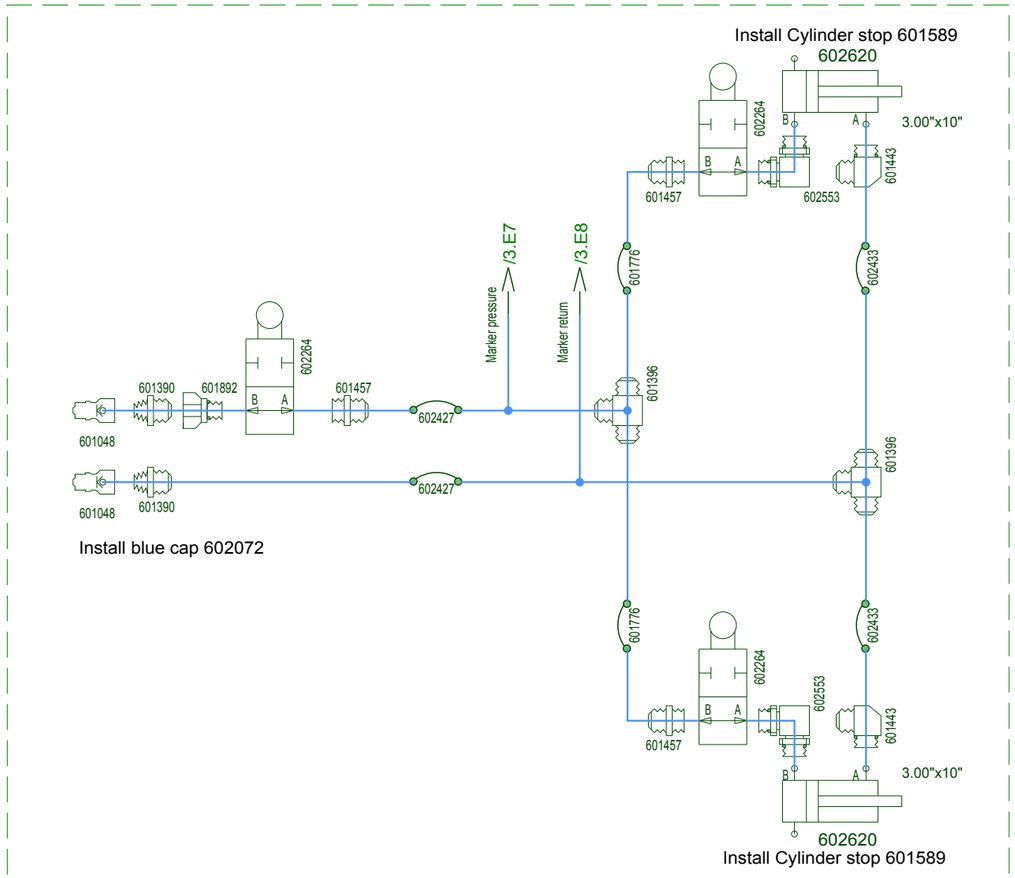
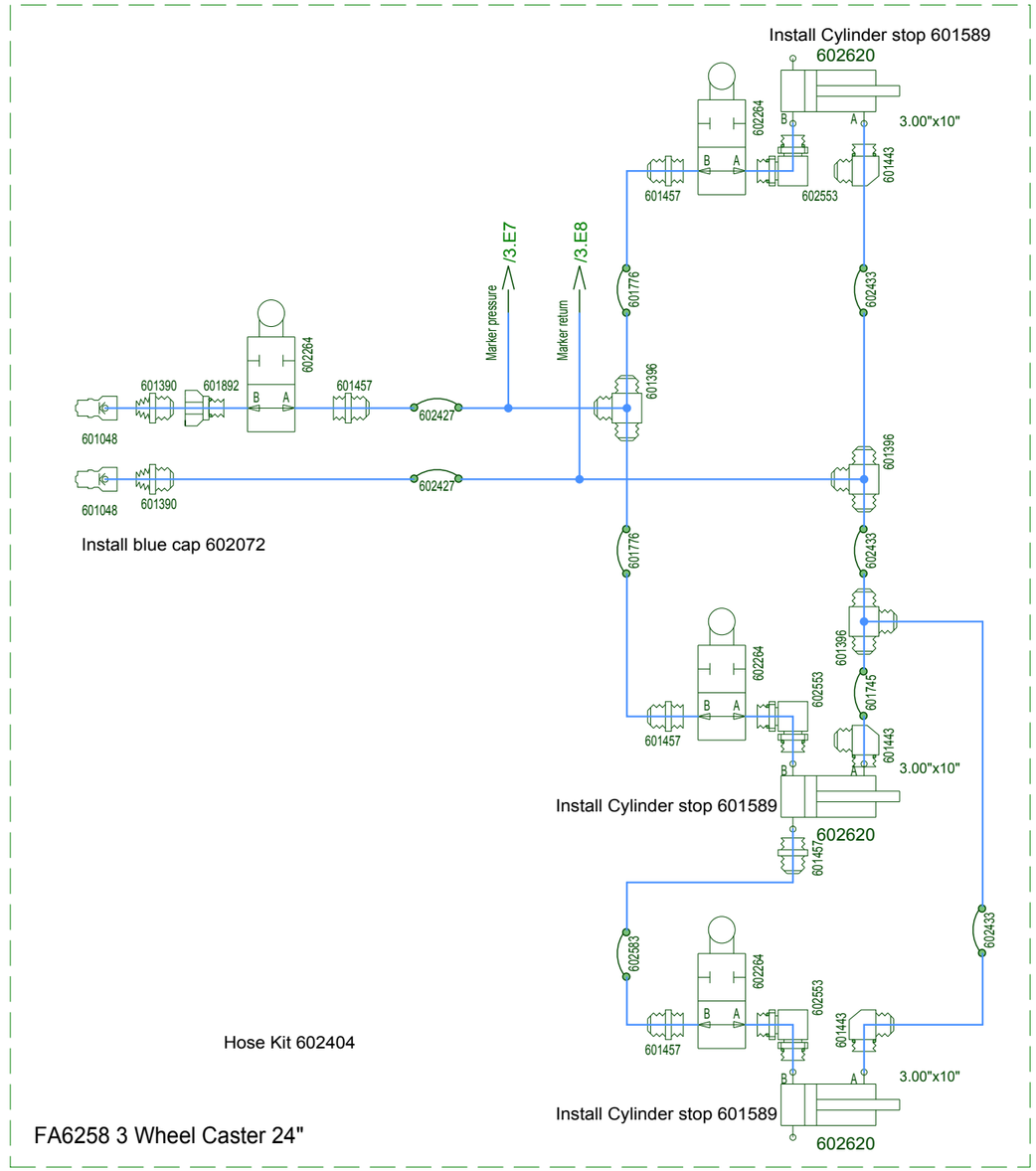
				date	10/26/2007			SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	**Coversheet**	
				User	TK					
				Proved						Sheet 1
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by		Sh. 18

QUICK CONNECT IDENTIFICATION

Blue -> Walking Beam up/down & Marker Arms
Red -> Hydraulic Drive/ Feed Chain
Green -> Dry Fertilizer
Black -> Walking Beam Steering
Yellow -> End Tow Package





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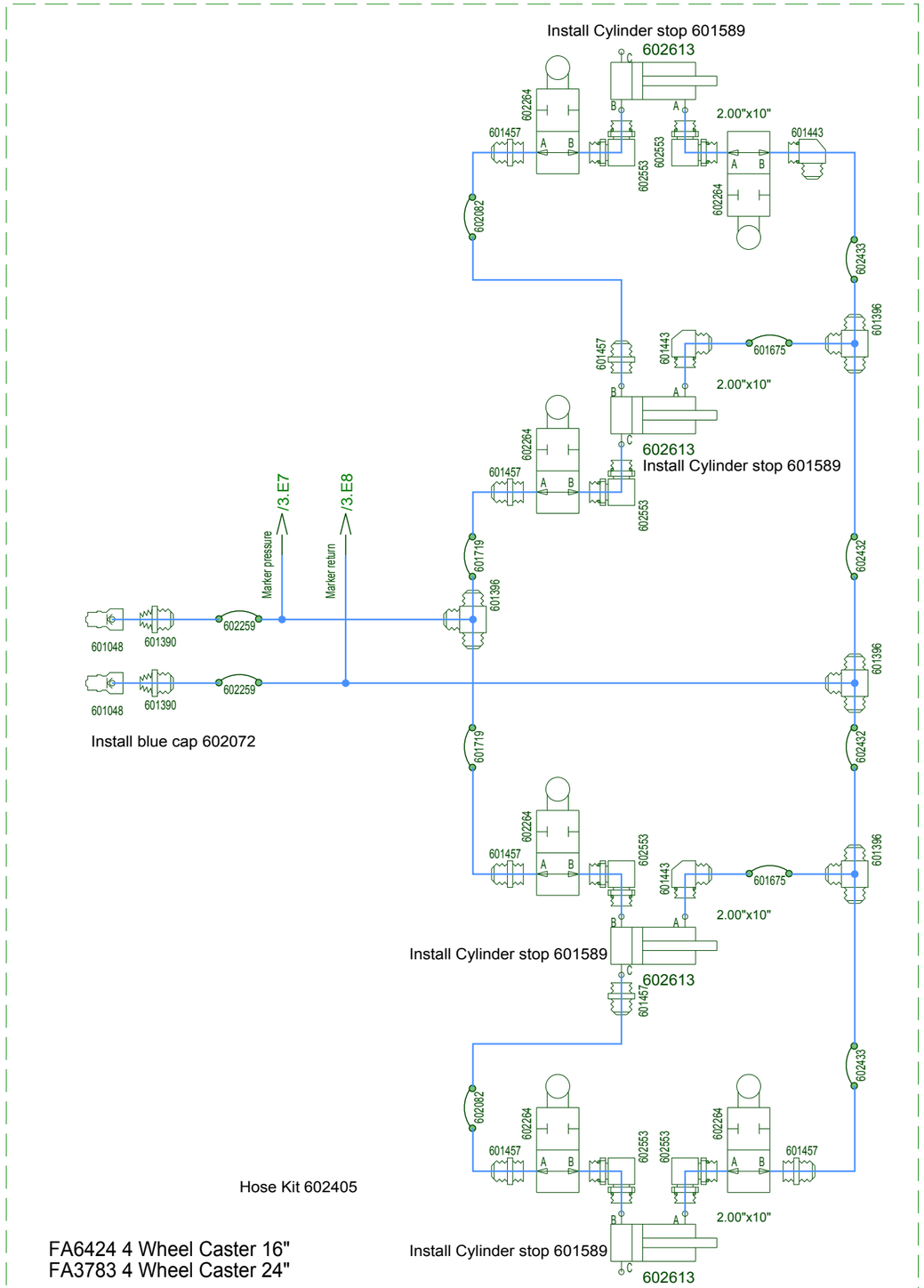
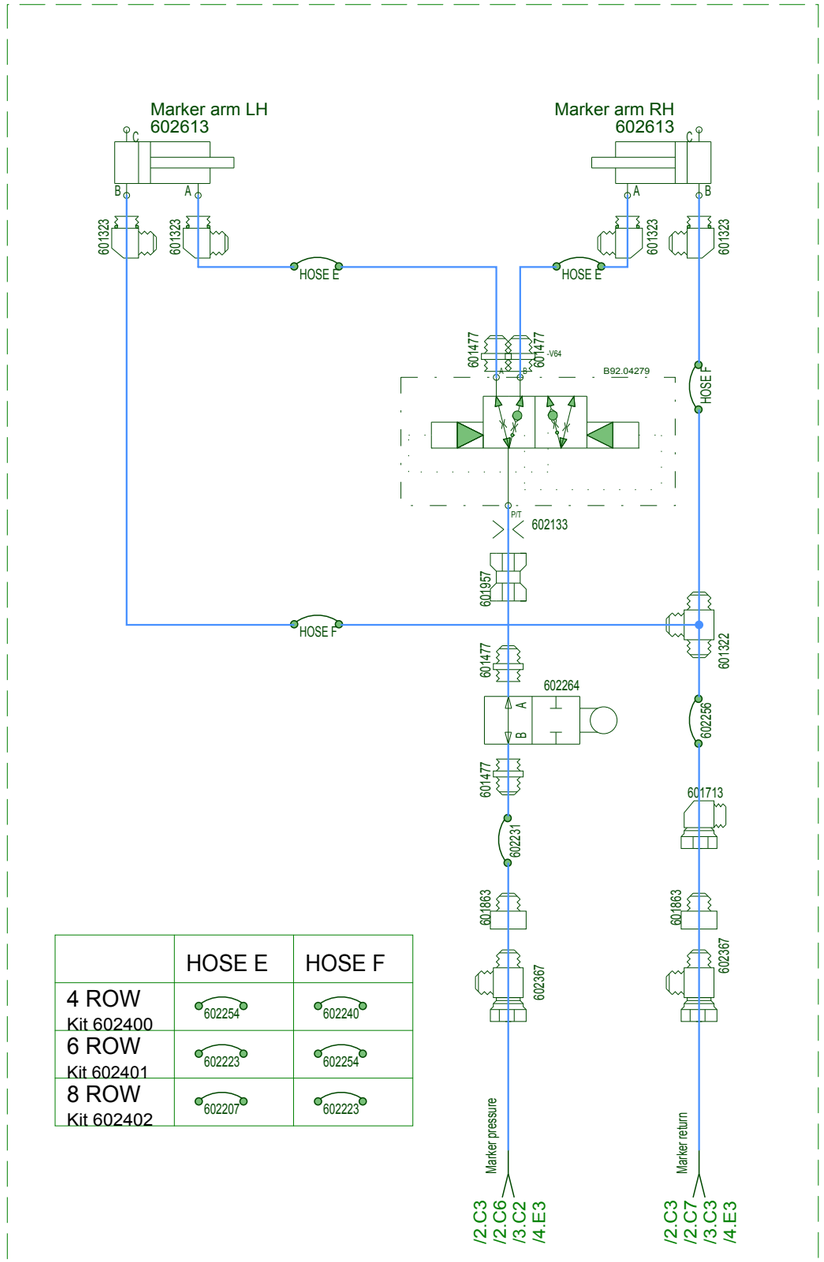
				date	10/26/2007			SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	2 & 3 Wheel Caster
				User	TK				
				Proved					Sheet 2
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by	Sh. 18





	HOSE E	HOSE F
4 ROW Kit 602400	602254	602240
6 ROW Kit 602401	602223	602254
8 ROW Kit 602402	602207	602223

FA3993 Marker Arm 8040
FA3847 Marker Arm 8060
FA4005 Marker Arm 8080

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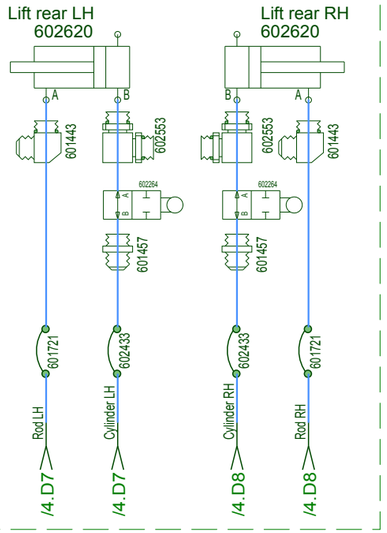
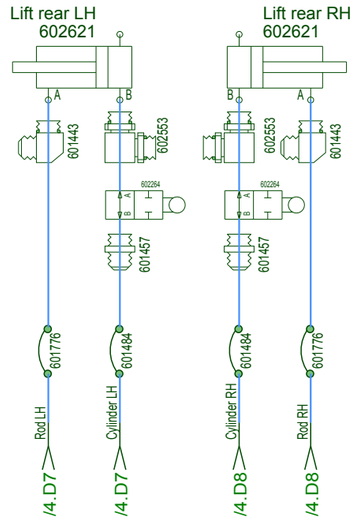
				date	10/26/2007			SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	4 Wheel Caster & Marker arm
				User	TK				
				Proved					Sheet 3
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by	Sh. 18

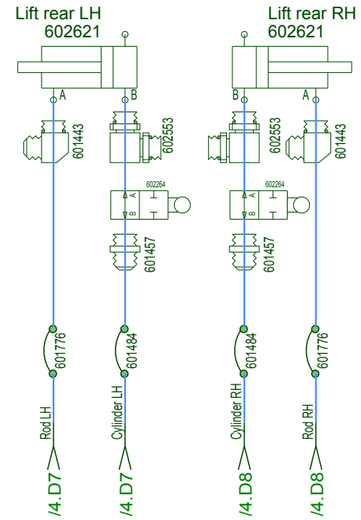
FA6122 2 Wheel Fixed 80XX
FA6682 2 Wheel Fixed 8047



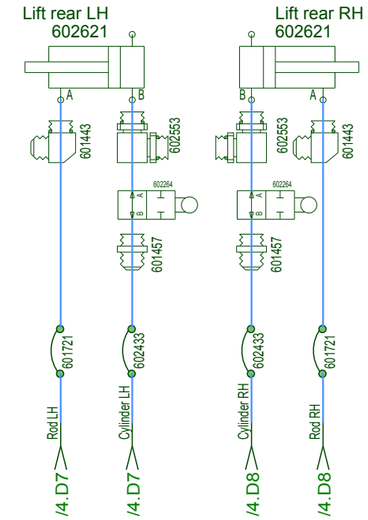
FA6119 4 Wheel WB 8040



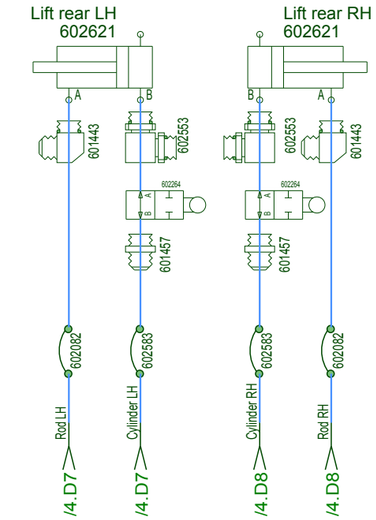
FA6753 STRBL Axle 8040
FA6754 STRBL Axle 8047



FA7131 4 Wheel WB 8060/80
FA7098 STRBL WB 8060/80

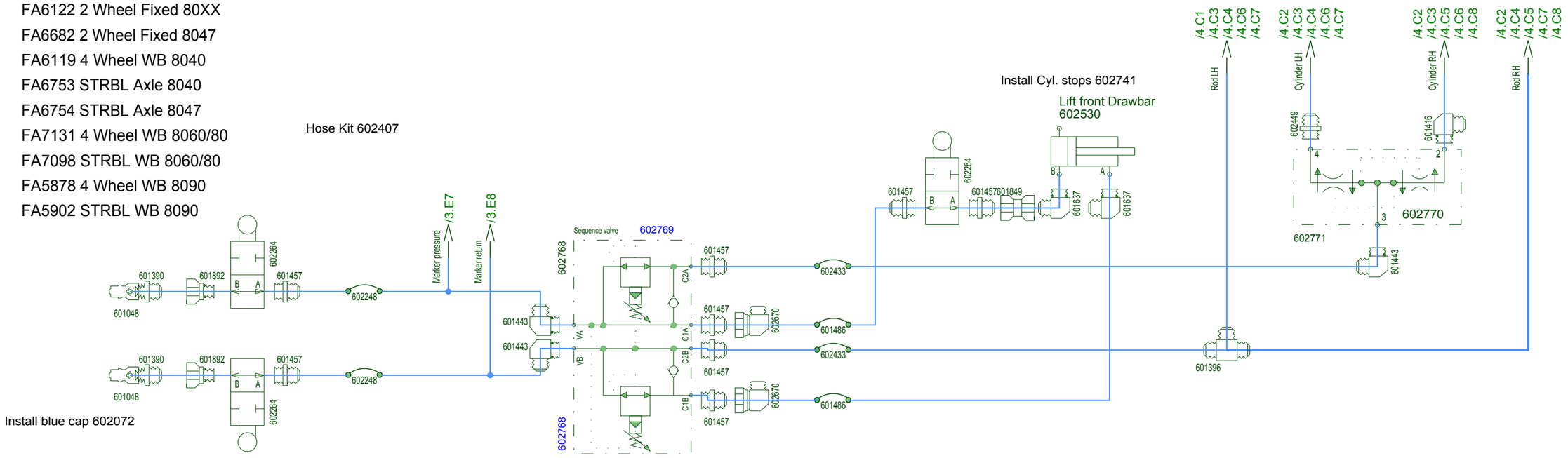


FA5878 4 Wheel WB 8090
FA5902 STRBL WB 8090



FA6122 2 Wheel Fixed 80XX
FA6682 2 Wheel Fixed 8047
FA6119 4 Wheel WB 8040
FA6753 STRBL Axle 8040
FA6754 STRBL Axle 8047
FA7131 4 Wheel WB 8060/80
FA7098 STRBL WB 8060/80
FA5878 4 Wheel WB 8090
FA5902 STRBL WB 8090

Hose Kit 602407



Install blue cap 602072

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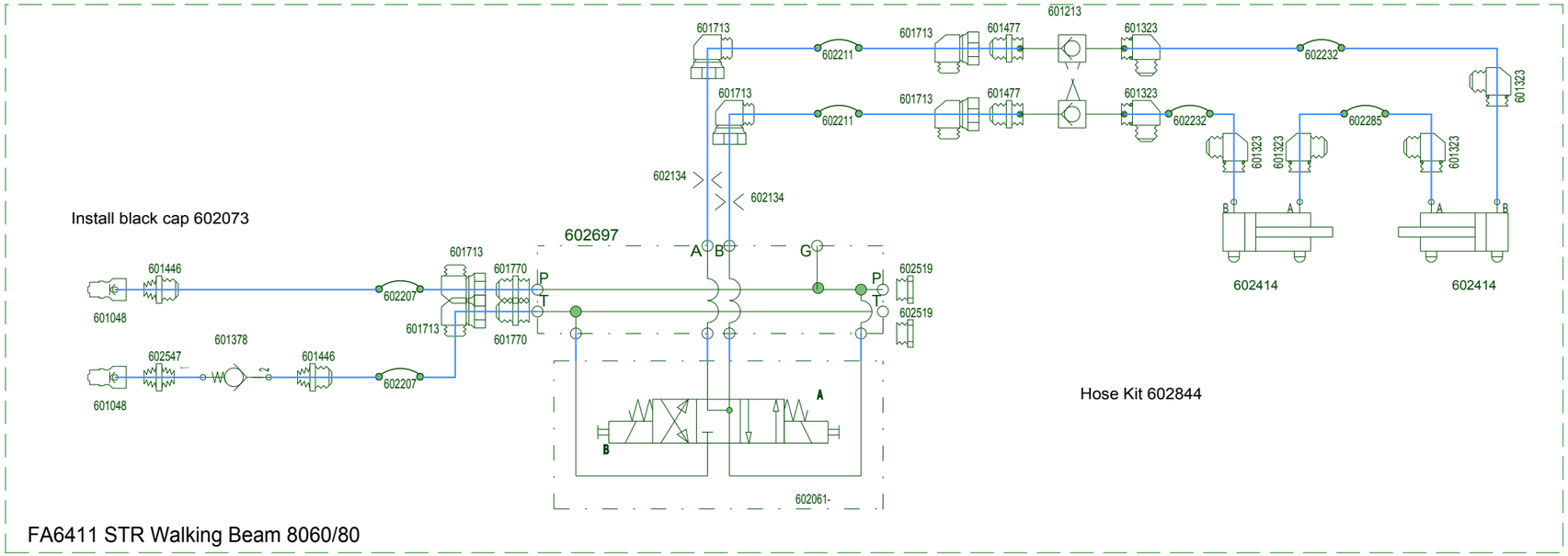
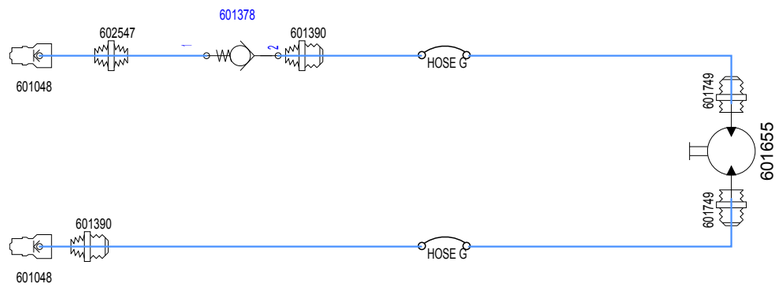
				date	10/26/2007			SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	4 Wheel Walking Beam & STRBL Axle 8040
				User	TK				
				Proved					Sheet 4
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by	Sh. 18



FA6411 STR Walking Beam 8060/80

	HOSE G
4 ROW in FA7114 and FA7117	601739
6 ROW in FA7115 and FA7118	602214
8 ROW in FA7116 and FA7119	602652



FA7148 HYD SHAKER LCCP

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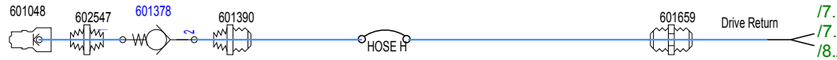
				date	10/26/2007			SPUDNIK	SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	STR Walking Beam 80XX & Hyd Shaker LCCP
				User	TK					
				Proved						Sheet 5
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by		Sh. 18

Install red cap 602071

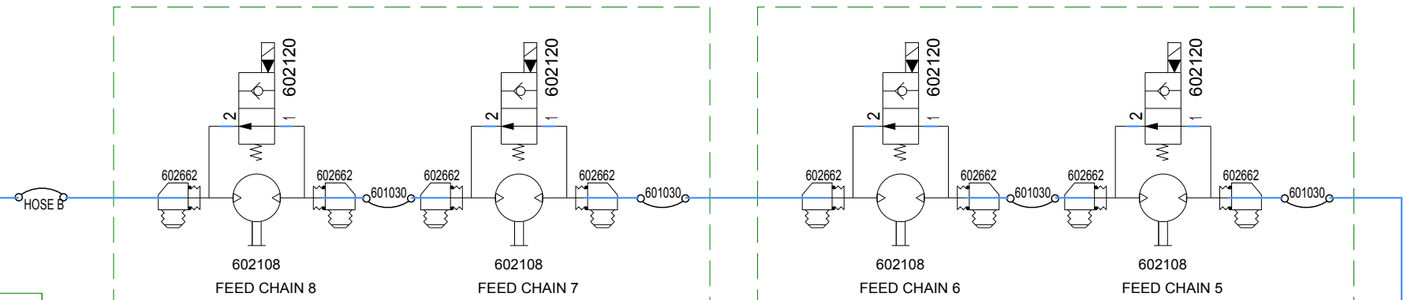


/7.B1 If hyd Drive Grimme Row Unit
/7.B5 If hyd Drive Spudnik Row Unit
/8.A1 If hyd Shaker w/mech Row Unit Drive and PCP
/8.A5 If hyd Shaker w/hyd Row Unit Drive and PCP

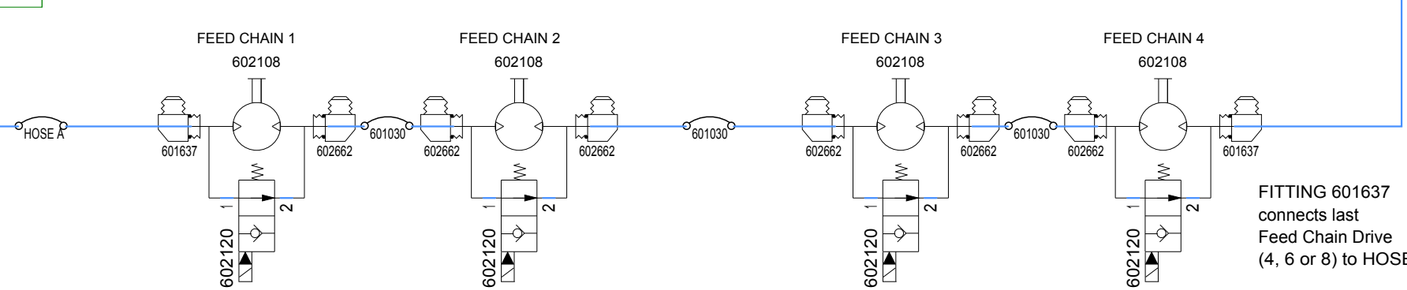
Connect HOSE B direct to Fitting 601659
if no hyd Drive and no hyd Shaker is chosen

If hyd Drive Grimme Row Unit /7.B4
If hyd Drive Spudnik Row Unit /7.B8
If hyd Shaker w/mech Row Unit Drive and PCP /8.A4

Feed Chain Return



	HOSE A	HOSE B
4 ROW HOSE KIT 602746	602258	602259
6 ROW HOSE KIT 602747	601711	601879
8 ROW HOSE KIT 602748	601748	602214



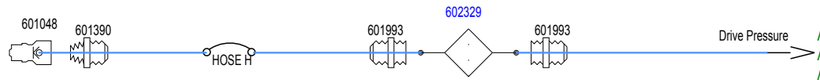
If hyd Drive Grimme Row Unit /7.E4
If hyd Drive Spudnik Row Unit /7.E8
If hyd Shaker w/mech Row Unit Drive and PCP /8.E4

Feed Chain Pressure

FITTING 601637
connects last
Feed Chain Drive
(4, 6 or 8) to HOSE B

Connect HOSE A direct to Filter
if no hyd Drive and no hyd Shaker is chosen

Install red cap 602071



/7.E2 If hyd Drive Grimme Row Unit
/7.E5 If hyd Drive Spudnik Row Unit
/8.E1 If hyd Shaker w/mech Row Unit Drive and PCP

	HOSE H
SEMI MNT in FA7150 chosen in background w/semi mnt	601734
DRAWBAR STANDARD FA5683	601711
DRAWBAR LONG FA6632	601748
DRAWBAR SHORT FA5684	602235

FA6042 Hopper Group 8040	HOSE KIT 602746
FA6044 Hopper Group 8060	HOSE KIT 602747
FA6045 Hopper Group 8080	HOSE KIT 602748

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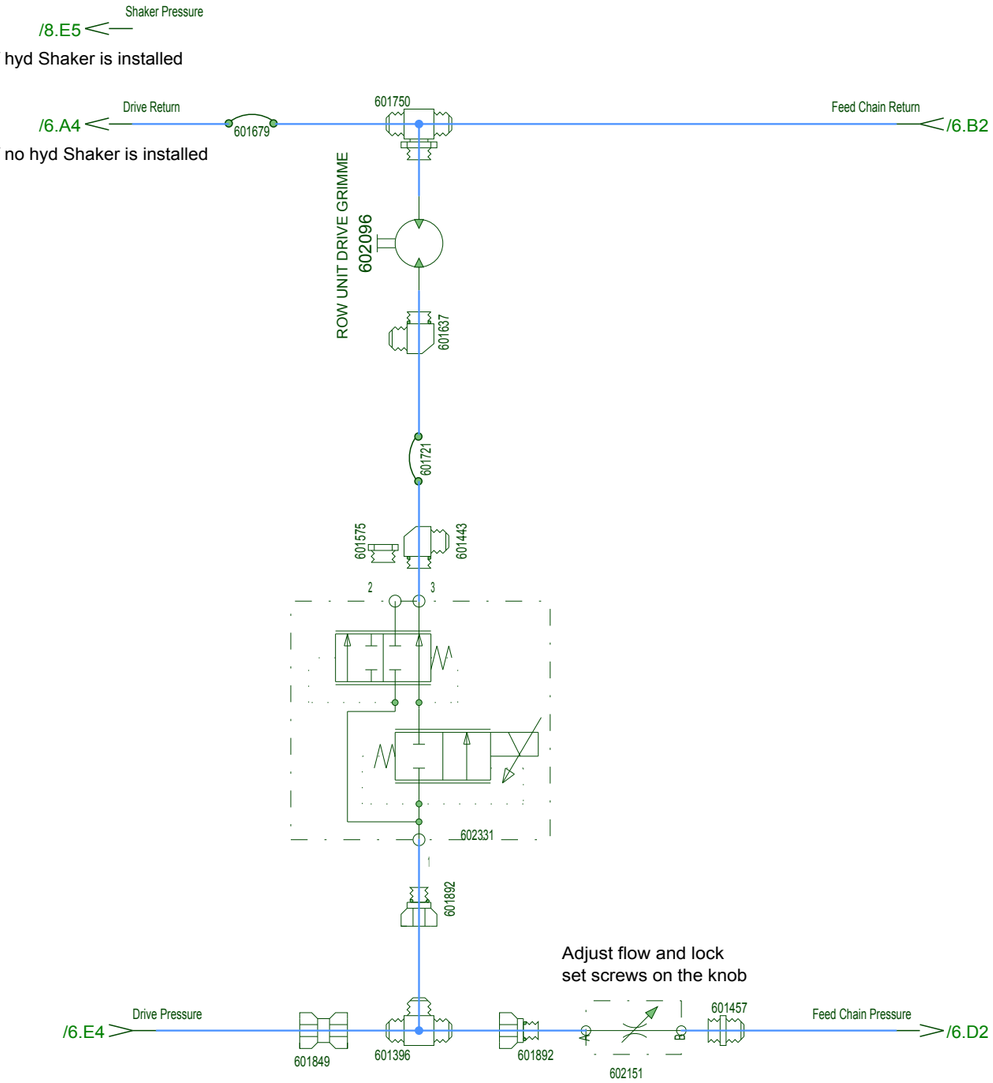
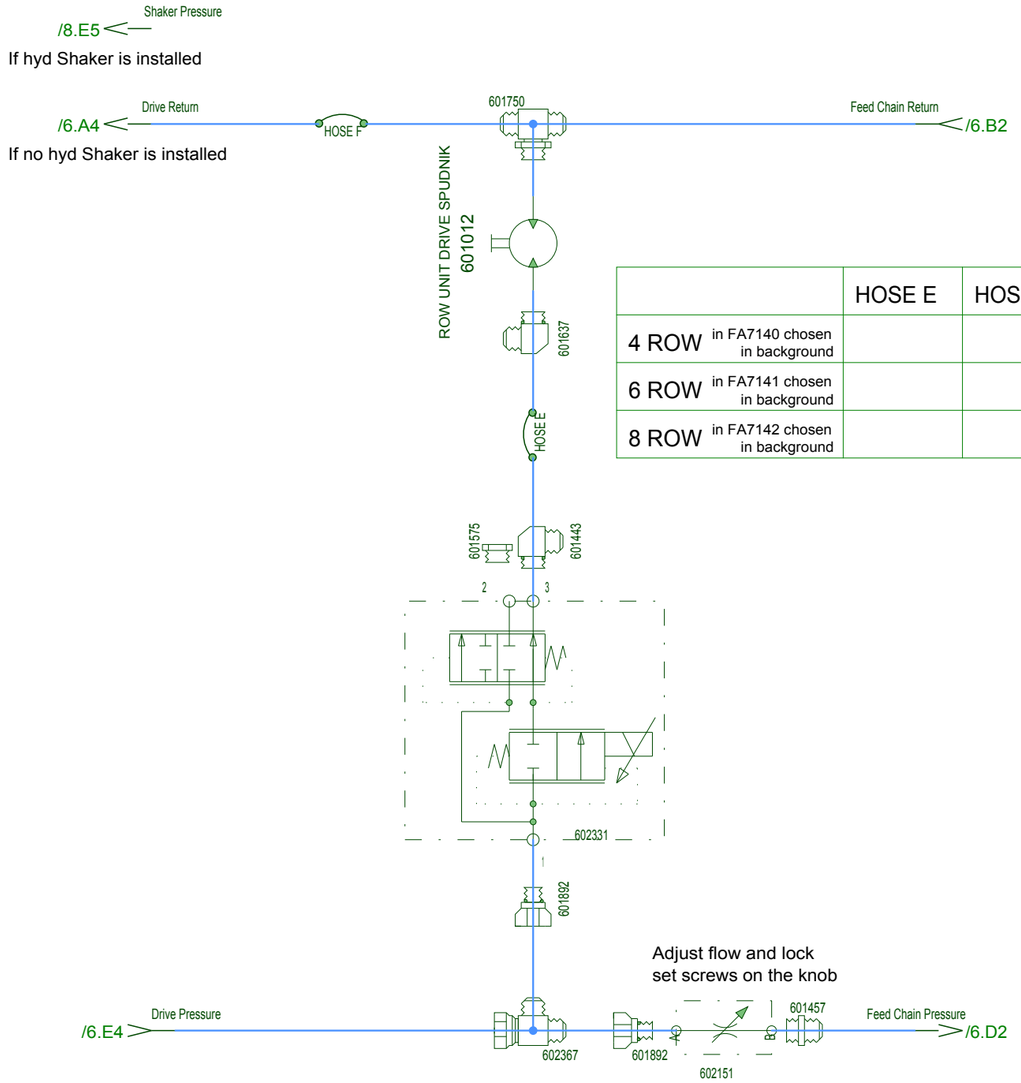
				date	10/26/2007			SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	Drive Feed Chain (Hopper Group)
				User	TK				
				Proved					Sheet 6
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by	Sh. 18



FA3777 Grimme Row Unit



	HOSE E	HOSE F
4 ROW in FA7140 chosen in background		
6 ROW in FA7141 chosen in background		
8 ROW in FA7142 chosen in background		

FA6059 Spudnik Row Unit

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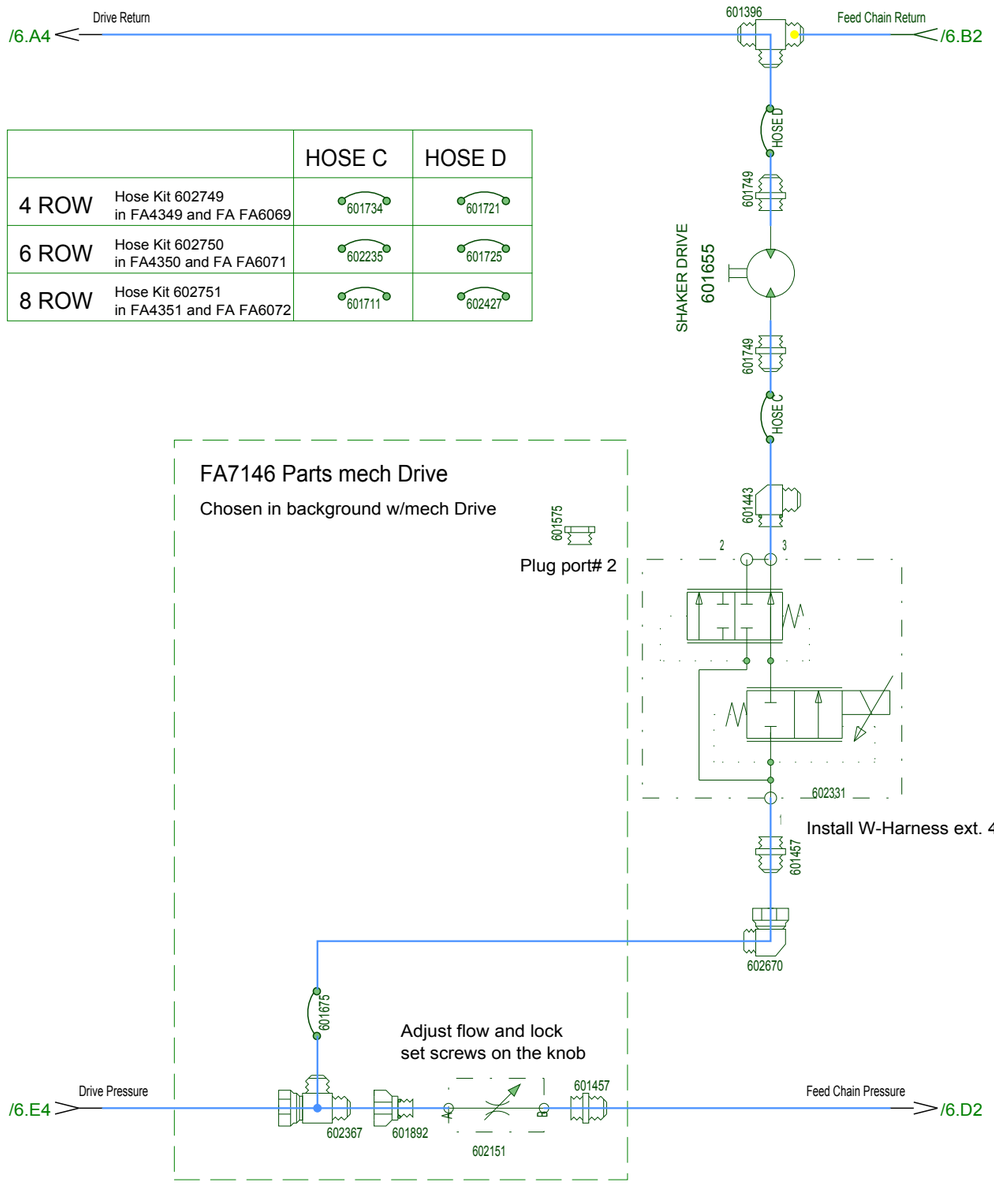
				date			SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	Drive Row Unit	
				User	TK				
				Proved				Sheet 7	
Status	change	date	name	Standard		Origin / Repl. f. / Repl. by		Sh. 18	

Replace 601659 Drive Feed Chain



		HOSE C	HOSE D
4 ROW	Hose Kit 602749 in FA4349 and FA FA6069	601734	601721
6 ROW	Hose Kit 602750 in FA4350 and FA FA6071	602235	601725
8 ROW	Hose Kit 602751 in FA4351 and FA FA6072	601711	602427

FA7146 Parts mech Drive

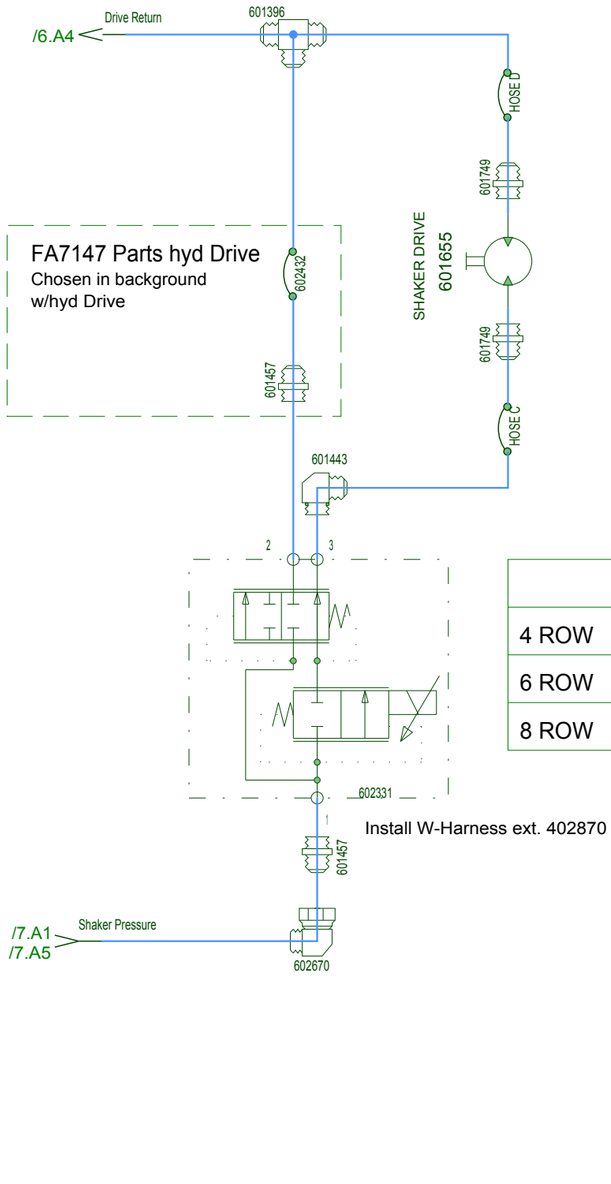
Chosen in background w/mech Drive

Install W-Harness ext. 402870

FA7145 Hyd Shaker w/PCP

w/mech Row Unit Drive

Replace 601659 Drive Feed Chain



FA7147 Parts hyd Drive

Chosen in background

w/hyd Drive

		HOSE C	HOSE D
4 ROW	Hose Kit 602749 in FA4349 and FA FA6069	601734	601721
6 ROW	Hose Kit 602750 in FA4350 and FA FA6071	602235	601725
8 ROW	Hose Kit 602751 in FA4351 and FA FA6072	601711	602427

Install W-Harness ext. 402870

FA7145 Hyd Shaker w/PCP

w/hyd Row Unit Drive

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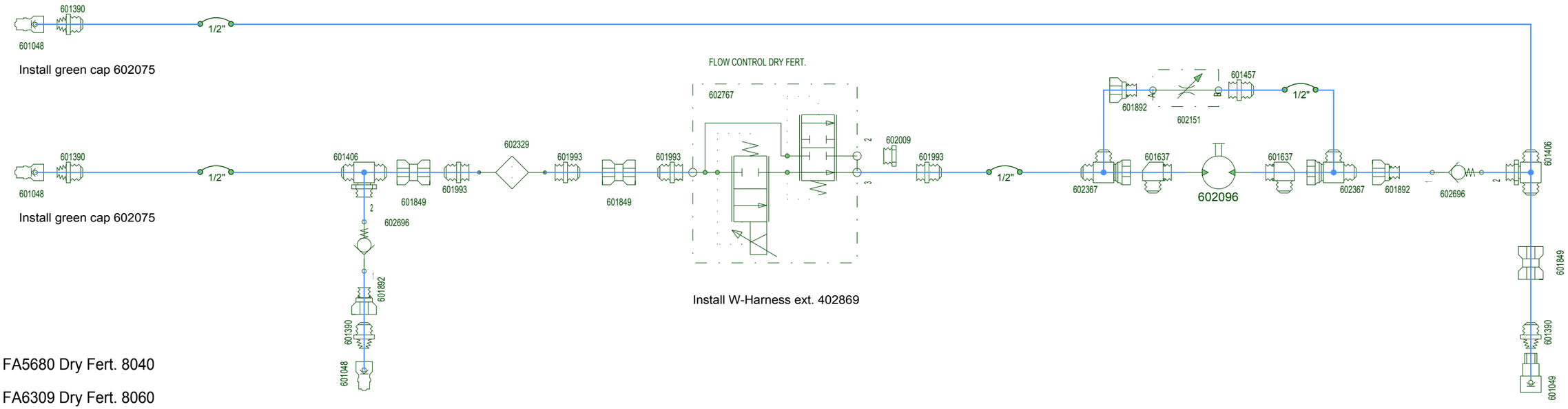
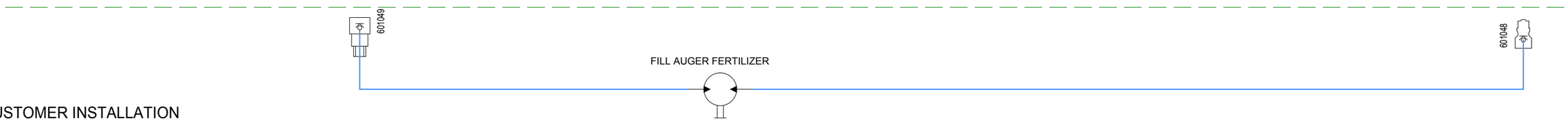
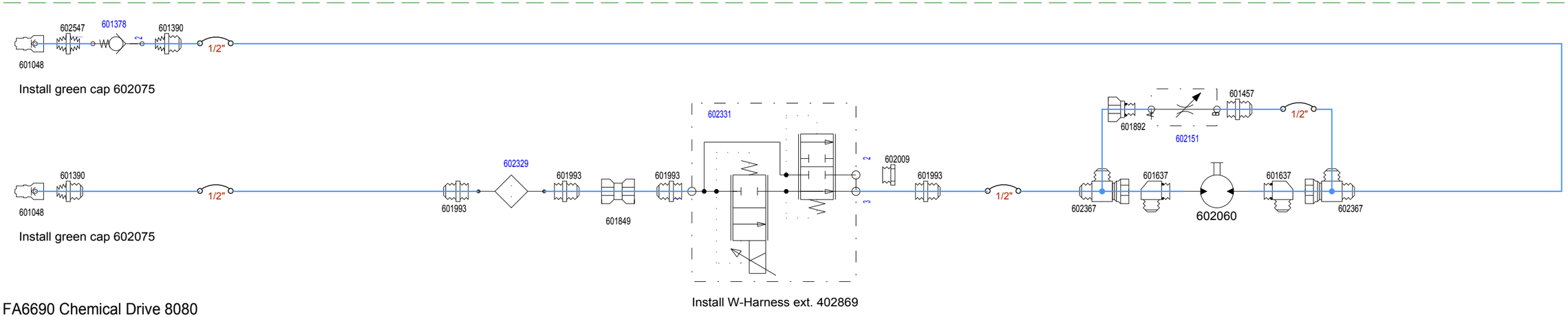
				date				SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	Drive Shaker
				User	TK				
				Proved					Sheet 8
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by	Sh. 18







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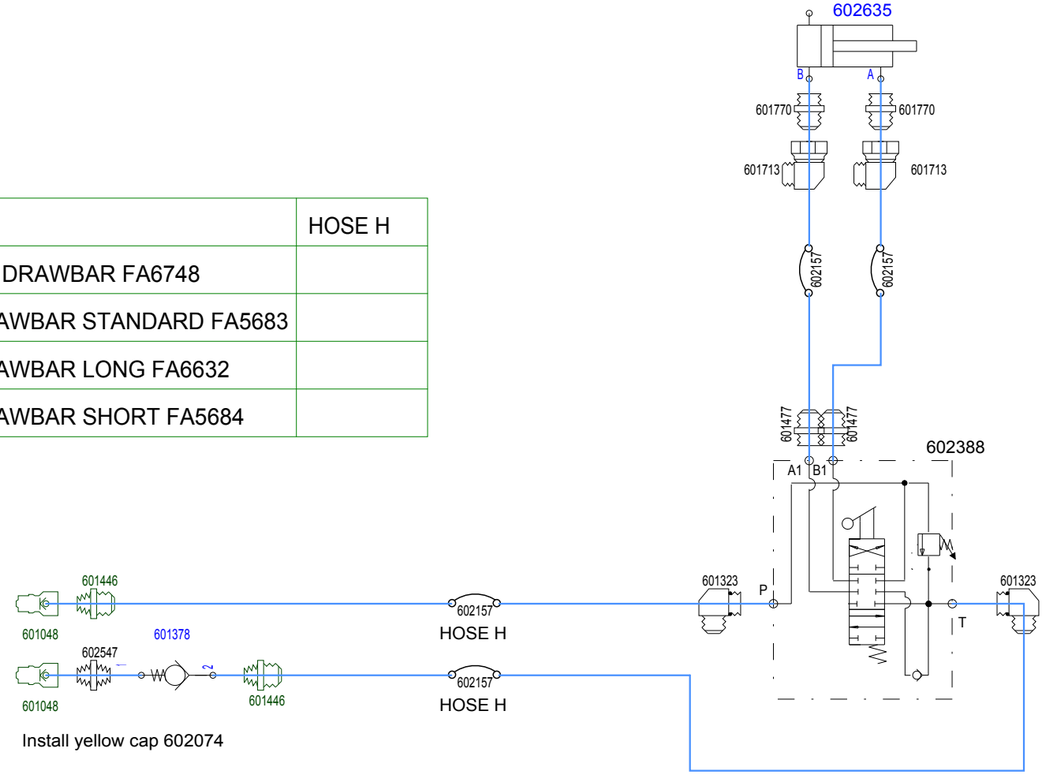
				date	10/26/2007			SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	Dry Fertilizer/ Fill Auger/ Chemical Drive
				User	TK				
				Proved					Sheet 9
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by	Sh. 18

	HOSE H
NO DRAWBAR FA6748	
DRAWBAR STANDARD FA5683	
DRAWBAR LONG FA6632	
DRAWBAR SHORT FA5684	



Install yellow cap 602074

Hose 1/4" cut to fit
info about hose length please back to eng

FA7113 End Tow 80XX

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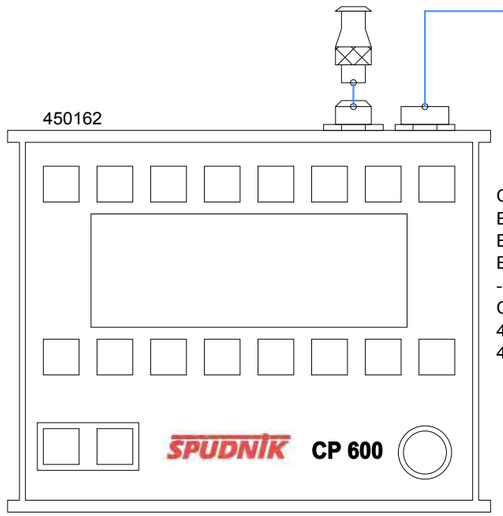
				date				SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	End Tow Package 80XX	
				User	TK					
				Proved						Sheet 10
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by		Sh. 18

B94.01736M

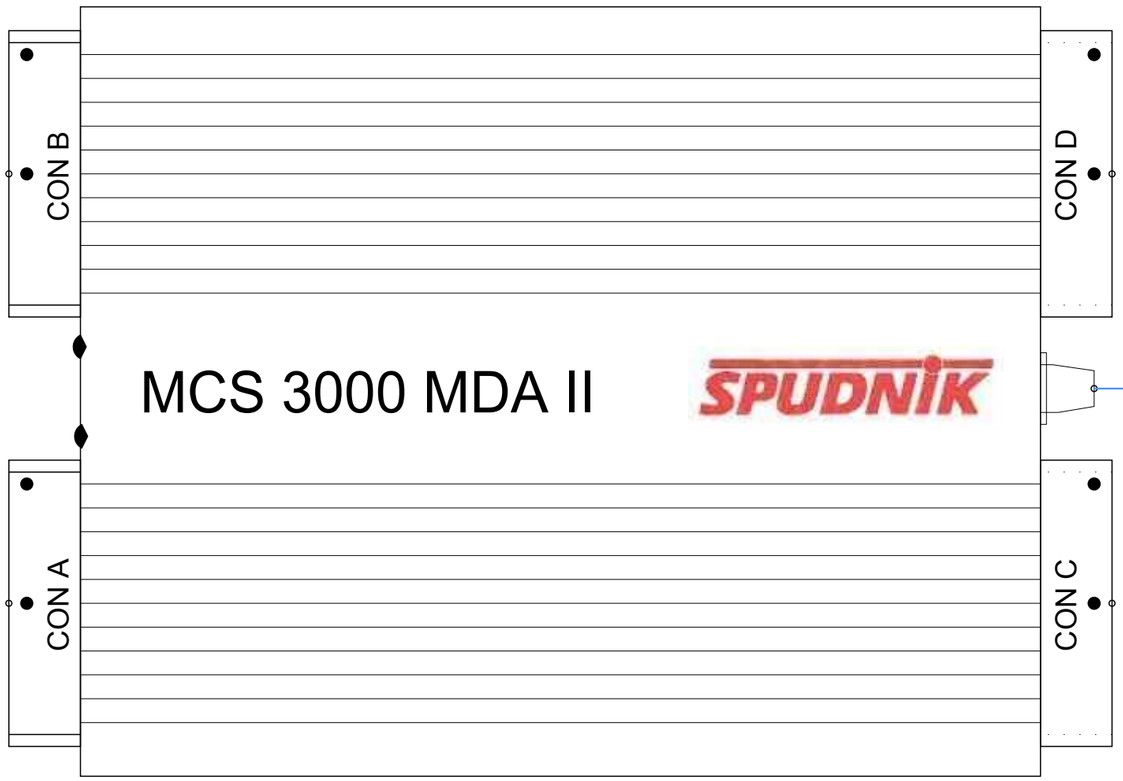
450162



CAN BUS CABLE
B94.01759M CAN BUS CABLE 315"(8M) M12x1 8-WIRE
B94.01683 CAN BUS CABLE 80" (2M) M12x1 8-WIRE
B94.01685M CAN BUS CABLE 196"(5M) M12x1 8-WIRE

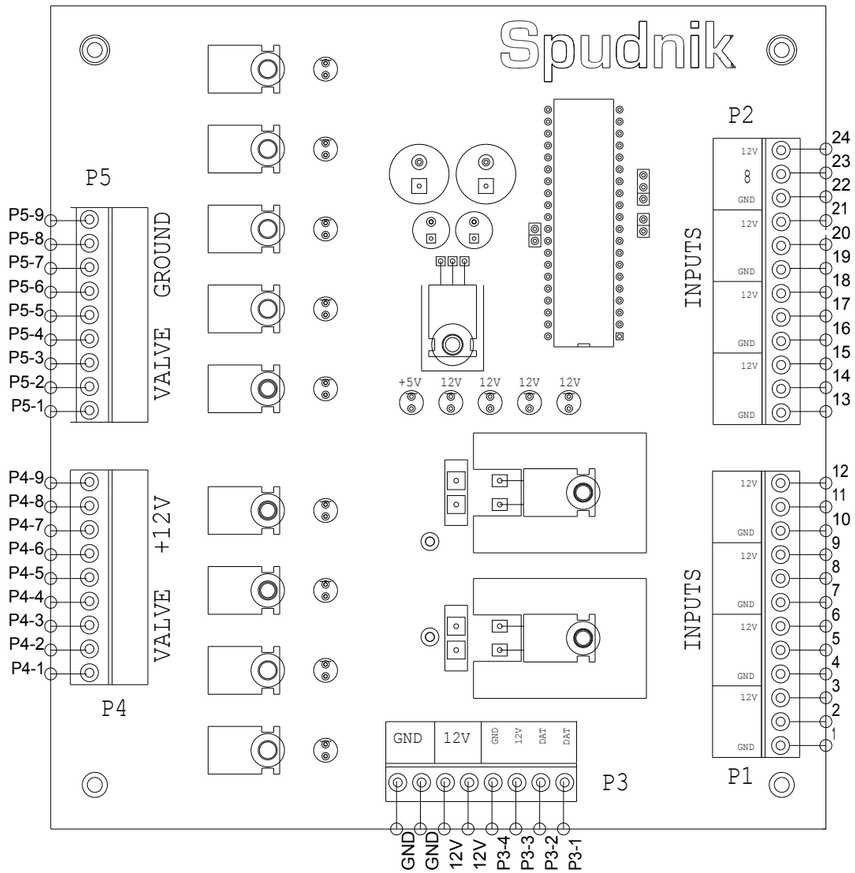
CABLE HARNESS
402758 W-HARNESS,8040/8060-PROFFES-05-CURRENT
402759 W-HARNESS,8080-EXT-PROFFES-05-CURRENT

-PCB2
B94.03009M

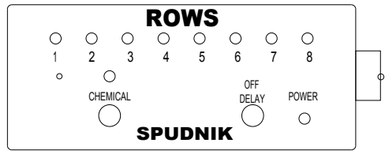


Professional Control Terminal

-PCB1
450130



450152



CABLE HARNESS
402760 W-HARNESS,8040/8060-LOW-05-CURRENT
402761 W-HARNESS,8080-EXT-LOW-05-CURRENT

LOW COST CONTROL TERMINAL

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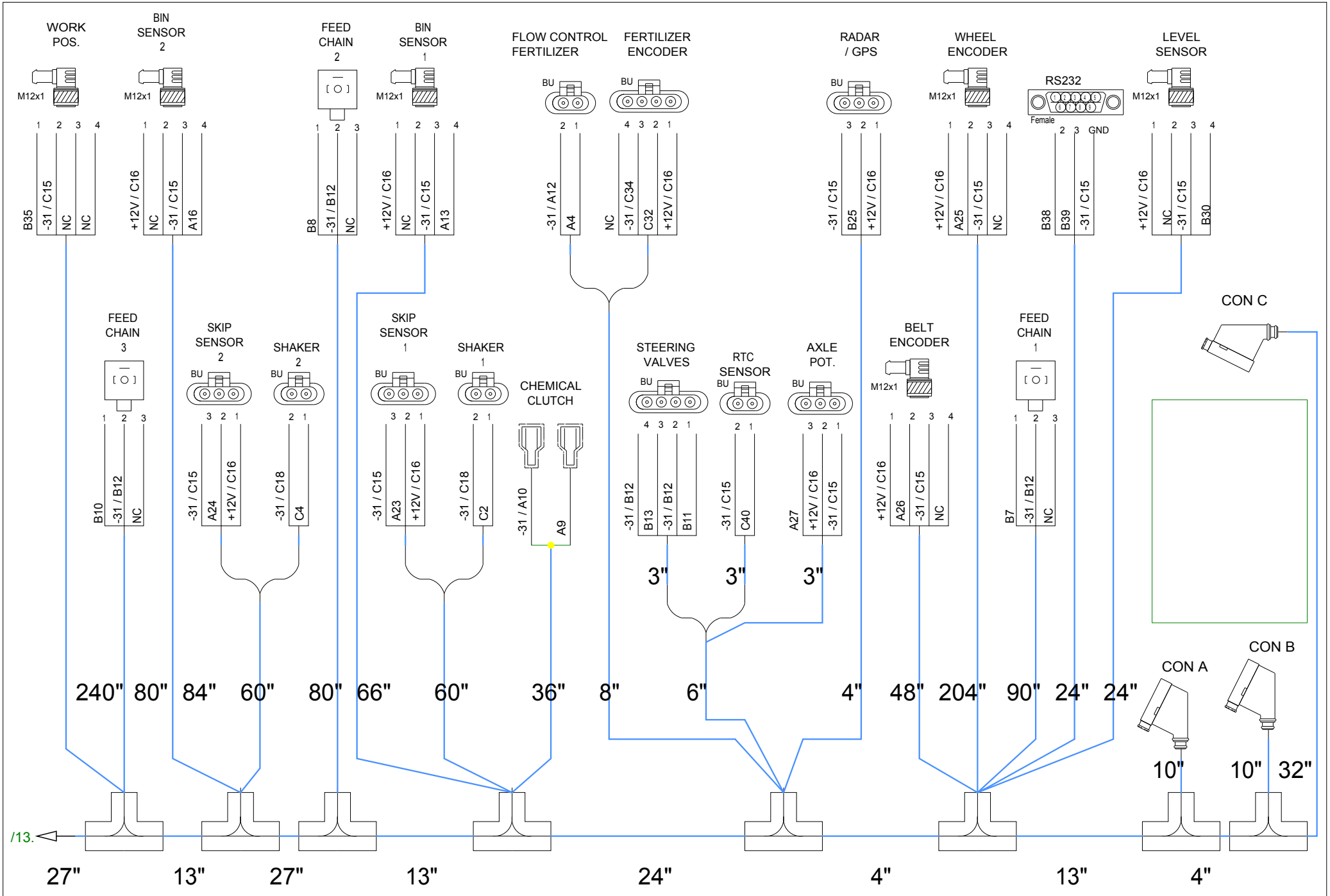
				date	10/26/2007			SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	OVERVIEW ELECTRIC
				User	TK				
				Proved					Sheet 11
Status	change	date	name	Standard		Origin	Repl. f.	Repl. by	Sh. 18



				date	10/26/2007	SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	6 ROW PROF. CONTROL CABLE HARNESS 402758	Sheet 12 Sh. 18
				User	TK			
				Proved	TK			
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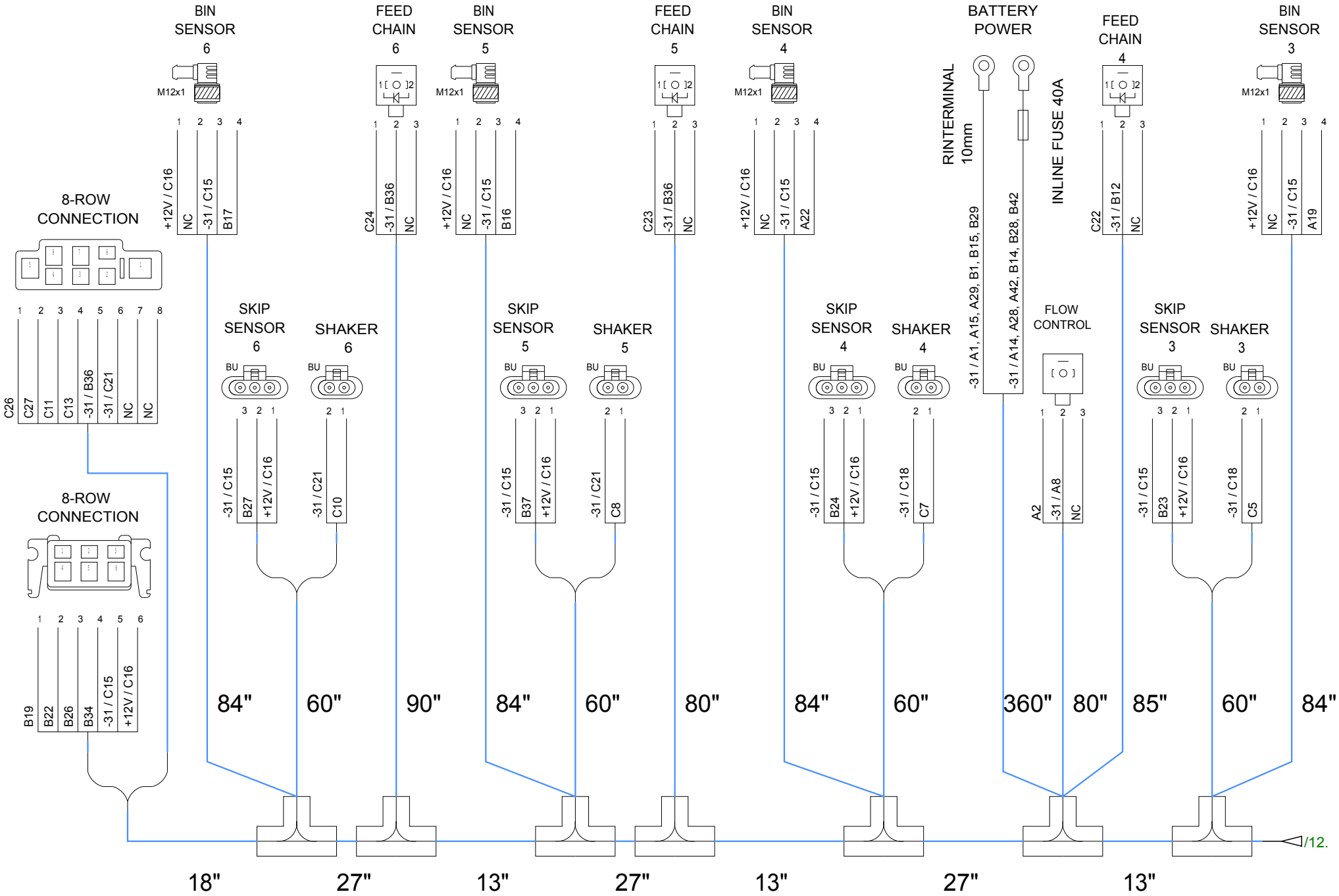
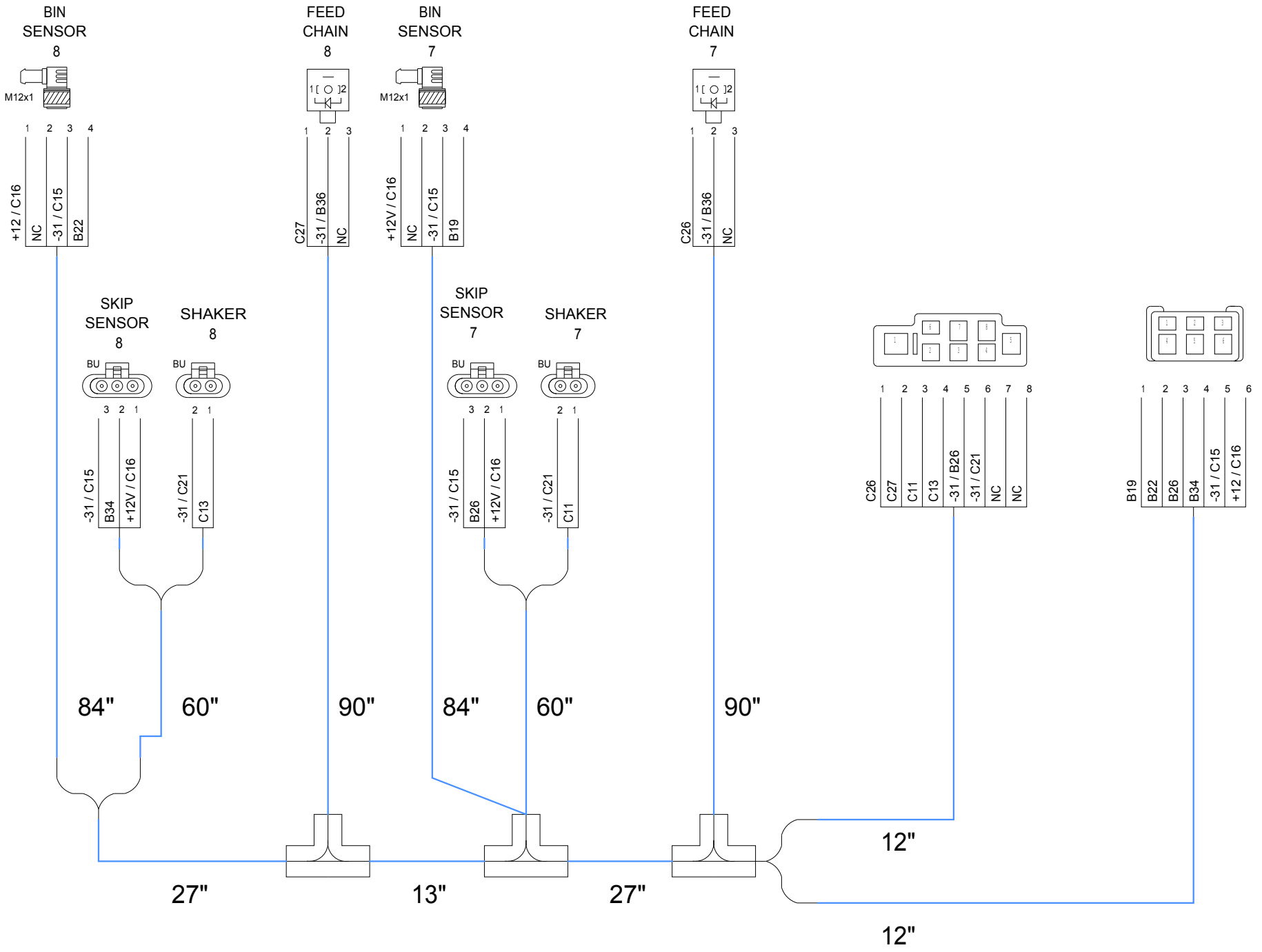


				date	10/26/2007	SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	6 ROW PROF. CONTROL CABLE HARNESS
				User	TK		402758
				Proved	TK		Sheet 13 Sh. 18
Status	change	date	name			We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third parties without express authority is strictly forbidden.© SPUDNIK EQUIPMENT	SPUDNIK



				date	10/26/2007	SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	8 ROW PROF. CONTROL EXT. HARNESS 402759
				User	TK		Sheet 14
				Proved	TK		Sh. 18
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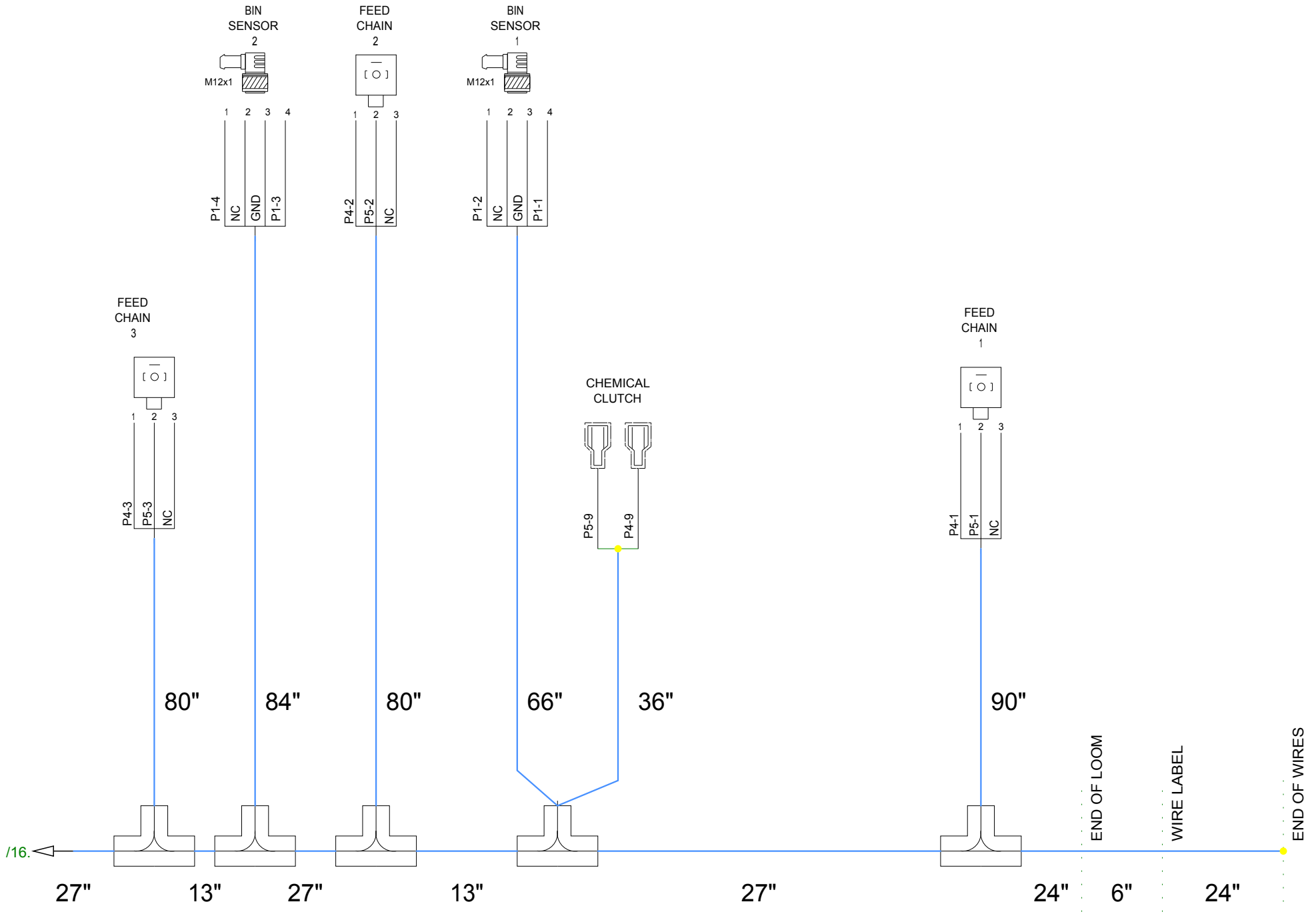
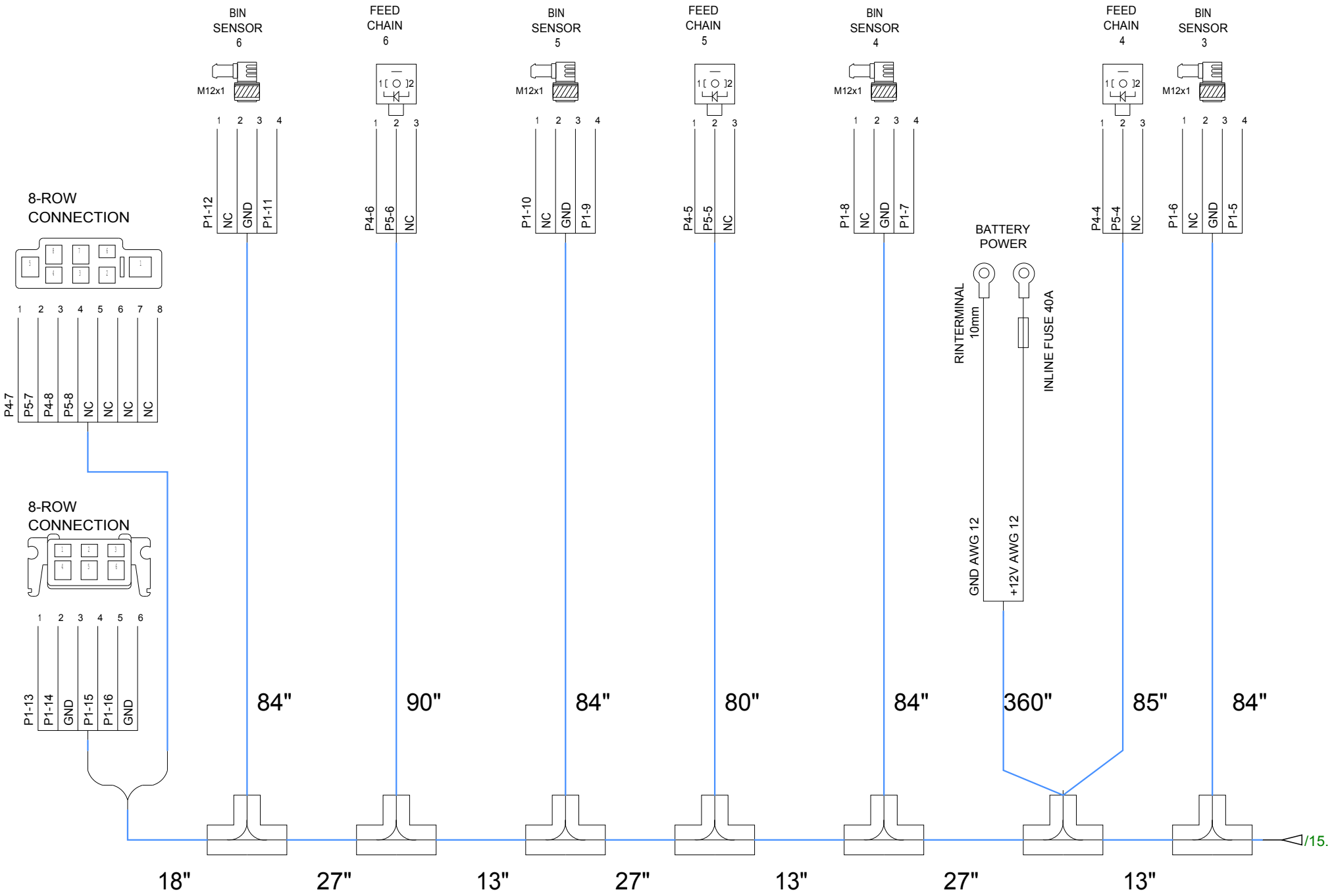


				date	10/26/2007	SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	6 ROW LOW COST HARNESS 402760	Sheet 15 Sh. 18
				User	TK			
				Proved	TK			
Status	change	date	name			We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third parties without express authority is strictly forbidden.© SPUDNIK EQUIPMENT		SPUDNIK



				date	10/26/2007	SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	6 ROW LOW COST HARNESS
				User	TK		402760
				Proved	TK		Sheet 16
							Sh. 18
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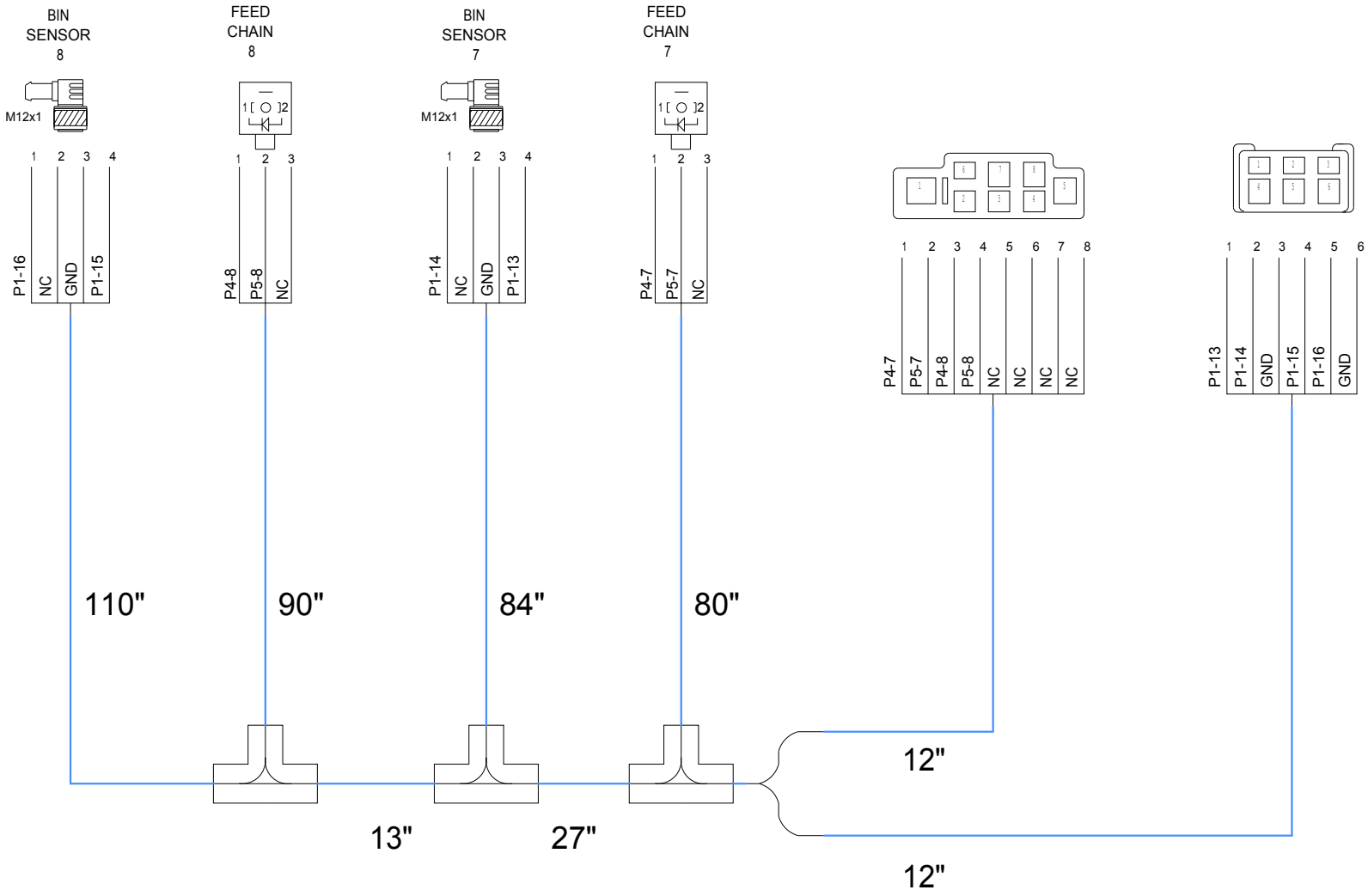
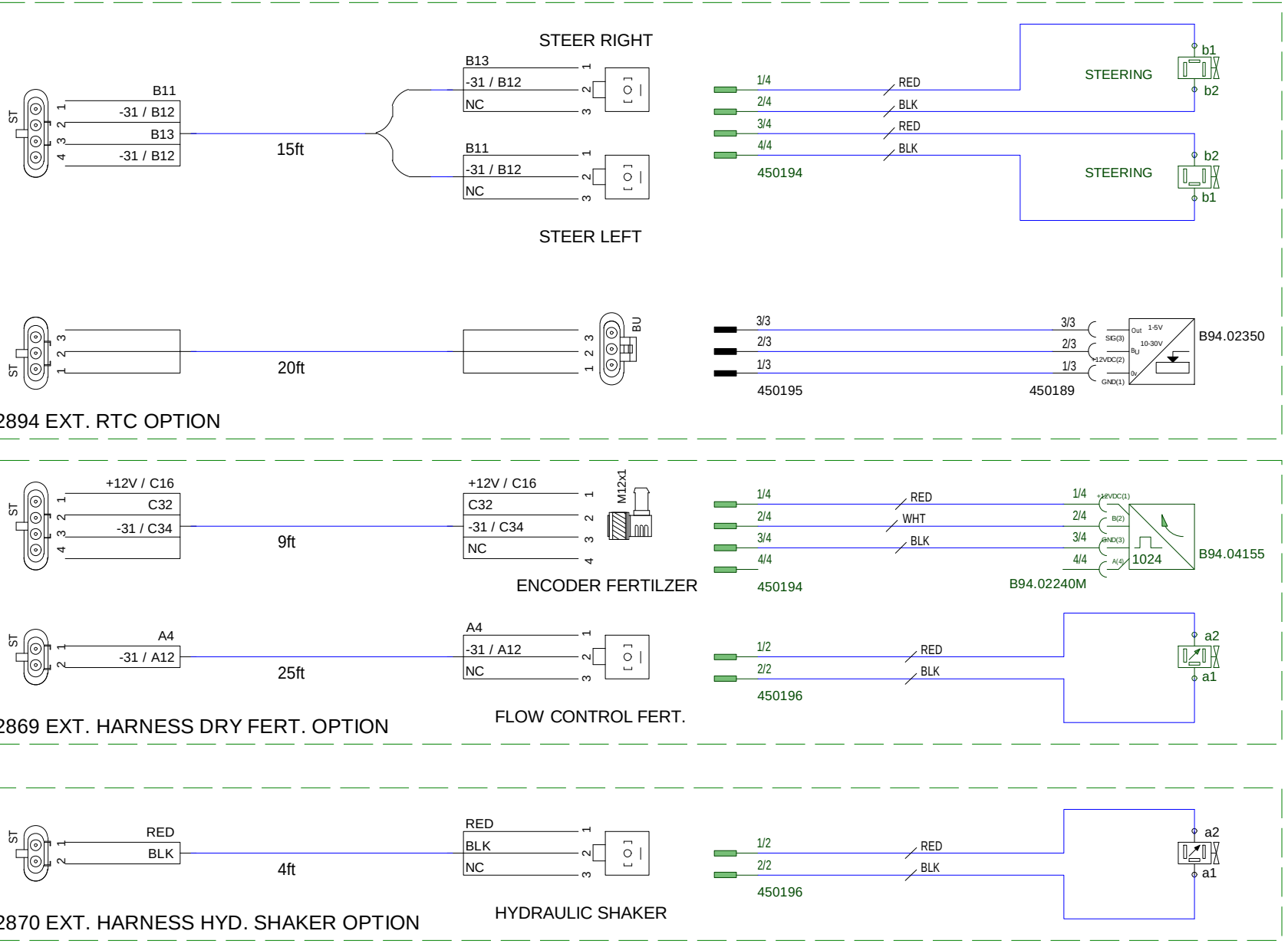


				date	10/26/2007	SPUDNIK EQUIPMENT COMPANY LLC 100N 584W BLACKFOOT,ID,83221 www.spudnik.com	8 ROW LOW COST EXT. HARNESS 402761	Sheet 17 Sh. 18
				User	TK			
				Proved	TK			
Status	change	date	name			We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third parties without express authority is strictly forbidden.© SPUDNIK EQUIPMENT		SPUDNIK



RTC	Changing the RTC Cable	09/13/07		date	04/22/2008
402869	Fixed ST pinouts to match other end.	4/22/2008	JBB	User	TK
				Proved	TK
Status	change	date	name		

SPUDNIK EQUIPMENT COMPANY LLC
100N 584W
BLACKFOOT,ID,83221
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W-HARNESS-SENSOR/VALVE EXTENSIONS

Sheet 18

Sh. 18

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SPUDNIK

SPUDNIK EQUIPMENT DEALER, REQUEST FOR WARRANTY PAYMENT

DEALER _____

DATE OF WARRANTY REQUEST _____

DATE FAULTY PARTS WERE RETURNED _____

PART NUMBER	QTY	PARTS DESCRIPTION	PRICE	EXTENSION
Outside Services			**Total Parts**	
			Total Outside	

CUSTOMER _____

ADDRESS _____

_____

CITY _____ STATE _____ ZIP CODE _____

PHONE _____ DATE _____

Equipment Description:

Model # | Year | Serial #

Work Description:

Reason for warranty payment: (Check one please)

Goodwill (approval needed) ___ Workmanship ___ Poor design ___ Parts failure ___

R & D ___ Damage during shipping or delivery ___ Other ___

Explanation:

Record of Workers and Time

Employee	Hours

TOTAL HOURS	
RATE PER HR.	
TOTAL LABOR	
TOTAL PARTS	
OUTSIDE CHARGES	
TOTAL AMOUNT	

Customer authorization by: _____

Written by: _____

SPUDNIK EQUIPMENT DEALER, REQUEST FOR WARRANTY PAYMENT

DEALER _____

DATE OF WARRANTY REQUEST _____

DATE FAULTY PARTS WERE RETURNED _____

PART NUMBER	QTY	PARTS DESCRIPTION	PRICE	EXTENSION
Outside Services			**Total Parts**	
			Total Outside	

CUSTOMER _____

ADDRESS _____

_____

CITY _____ STATE _____ ZIP CODE _____

PHONE _____ DATE _____

Equipment Description:

Model # | Year | Serial #

Work Description:

Reason for warranty payment: (Check one please)

Goodwill (approval needed) ___ Workmanship ___ Poor design ___ Parts failure ___

R & D ___ Damage during shipping or delivery ___ Other ___

Explanation:

Record of Workers and Time

Employee	Hours

TOTAL HOURS	
RATE PER HR.	
TOTAL LABOR	
TOTAL PARTS	
OUTSIDE CHARGES	
TOTAL AMOUNT	

Customer authorization by: _____

Written by: _____